

2014 Annual Groundwater Monitoring Report

Operable Unit 2
Northrop Grumman Systems Corporation
Bethpage, New York
NYSDEC Site # 1-30-003A

Naval Weapons Industrial Reserve Plant
Bethpage, New York
NYSDEC Site # 1-30-003B

March 30, 2015



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**2014 Annual Groundwater
Monitoring Report**

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1. Introduction

This Groundwater Monitoring Report was prepared to document the operation, maintenance, and monitoring (OM&M) activities conducted for the on-site portion of the Operable Unit 2 (OU2) groundwater remedy (i.e., the Tower 96 and Tower 102 remedial systems) for the Northrop Grumman Systems Corporation (Northrop Grumman), Bethpage, New York facility (Site No. 1-30-003A) and former Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage New York (Site No. 1-30-003B). This report also documents the results of ongoing inorganic monitoring near former Northrop Grumman Plants 1 and 2, the results of groundwater monitoring of volatile organic compounds (VOCs) in downgradient (off-site) areas, and the results of outpost monitoring of VOCs in the distal portion of the off-site plume. These activities were conducted by Northrop Grumman, in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved methodologies and procedures (see Section 2 for details), to meet the remedial action objectives (RAOs) set forth in the March 2001 OU2 Record of Decision (ROD) (NYSDEC 2001).

This report describes the performance and effectiveness monitoring of the on-site portion of the OU2 groundwater remedy (also referred to as the On-Site Containment [ONCT] system) for the Fourth Quarter 2014 (current period) and the Year 2014 (reporting period). As such, this report is the fourth quarter report for 2014 and is also the 2014 Annual Report. In the report, the current period data is compared to the previous three 2014 quarterly reports issued by ARCADIS (2014a; 2014b; 2014c) and to longer-term data trends (also referred to as the period of record), as applicable. This report also focuses on an evaluation of groundwater quality data for VOCs from the second quarter of 2014 due to the comprehensive nature of the annual groundwater monitoring round conducted April through June 2014. Relevant Second Quarter 2014 data are summarized in tables contained in this report; complete Fourth Quarter 2014 groundwater monitoring data are summarized and provided in **Appendix B**.

The off-site portion of the OU2 groundwater remedy (i.e., the GM-38 Area System) was designed, constructed, and is operated, monitored, and maintained by the Navy. OM&M reports for the GM-38 Area System are prepared by the Navy and submitted to the NYSDEC, under separate cover.

The monitoring program, as well as the findings, conclusions, and recommendations discussed in this report, will be re-evaluated as additional data become available.

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2. Monitoring Program

The results for monitoring activities conducted during the current period and/or this reporting period are provided in **Tables 1 through 13, Figures 2 through 17 and Appendix B**, and are described and discussed in the following report sections: Remedial System Performance Monitoring (Section 3), Groundwater Flow (Section 4), and Groundwater Quality (Section 5). The locations of the Northrop Grumman site, the OU2 on-site groundwater remedy, the neighboring properties (i.e., the former Bethpage Facility Naval Weapons Industrial Reserve Plant [NWIRP] and former Occidental Chemical Corporation [OCC]/RUCO Polymer Corporation sites), and existing wells utilized in the monitoring program are shown on **Figure 1**.

Except as described in **Tables 1 through 13, Appendix B** and in Sections 3, 4, and 5 of this report, the procedures, methodologies and monitoring network utilized are consistent with those previously used and specified in the NYSDEC-approved OU2 Groundwater Monitoring Plan (ARCADIS Geraghty & Miller, Inc. 2001), as modified and approved (ARCADIS G&M Inc. 2006; ARCADIS 2012), and the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M Inc. 2003).

Appendix A of this report contains the field documentation for groundwater monitoring activities performed during 2014 by ARCADIS (i.e., groundwater sampling logs and chain-of-custody records). **Appendix B** of this report contains tabulated analytical data for groundwater monitoring wells sampled during the fourth quarter of 2014.

Data included in this report will also be submitted to the NYSDEC, in electronic data deliverable (EDD) format that complies with NYSDEC requirements, in accordance with the May 2010 DER-10, Section 1.15(a)2 (Electronic Submissions).

3. Remedial System Performance Monitoring

This report section summarizes the routine performance monitoring conducted and data collected during the current period (Fourth Quarter) and reporting period (Year 2014) for the on-site portion of the OU2 groundwater remedy and includes the following:

1. Remedial well water quality monitoring, remedial treatment systems effluent water quality monitoring, remedial treatment system efficiency monitoring, and determination of volatile organic compound (VOC) mass removal, and

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2. Monitoring of remedial well pumpage and remedial treatment systems treated effluent discharge to on-site recharge basins.

Also summarized in this report section are the key remedial treatment system and/or remedial well troubleshooting and non-routine maintenance activities performed by ARCADIS and Northrop Grumman during the fourth quarter of 2014.

3.1 Water Quality, Treatment Efficiencies, and Mass Removal

Tables 1 and 2 provide total VOC (TVOC) concentrations in the remedial wells. **Table 2** also summarizes the complete VOC analytical results for the fourth quarter of 2014 as well as the previously-submitted three quarters of 2014, for completeness, for remedial wells and treatment systems. Additionally, **Table 1** provides remedial well TVOC concentrations and treatment efficiencies for the Tower 96 and Tower 102 remedial treatment system air strippers for the current period, VOC mass removed by the remedial wells for the current period, Year 2014 (reporting period), and cumulative TVOC mass removed since the startup of Tower 102 in 1998.

TVOC concentrations from the remedial wells ranged from 79 micrograms per liter ($\mu\text{g/L}$) (Well 18) to 750 $\mu\text{g/L}$ (Well 1) during the current period and ranged from 69 $\mu\text{g/L}$ (Well 18) to 780 $\mu\text{g/L}$ (Well 1) during the reporting period (**Tables 1 and 2**). Further discussion of water quality data and trends for the remedial wells is provided in Section 5.1 of this Report.

Treatment efficiencies for the Tower 96 and Tower 102 remedial treatment air strippers were calculated based on influent and effluent TVOC concentrations. For the current period, the treatment efficiencies for Tower 96 and Tower 102 were calculated to be 99 percent and greater than 99.9 percent, respectively (**Table 1**). These treatment efficiencies are similar to the previous three quarters of the reporting period.

A total of approximately 1,724 pounds (lbs) of VOCs were removed from the aquifer by the remedial wells and treated during the current period. For Year 2014, approximately 4,696 lbs of VOC mass were removed from the aquifer and treated by the Tower 96 and Tower 102 remedial systems. Since full-time startup of Tower 102 in November 1998, approximately 185,955 lbs of VOCs have been removed from the aquifer and treated by the Tower 96 and Tower 102 remedial systems.

Northrop Grumman's State Pollutant Discharge Elimination System (SPDES) discharge monitoring results (for Permit No. NY0096792) are representative of treated

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water quality and determining the quality of water returned to the aquifer. SPDES discharge monitoring data are documented on a monthly basis by Northrop Grumman in Discharge Monitoring Reports (DMRs) that are transmitted to the NYSDEC under separate cover. Northrop Grumman Outfalls 006 and 005, respectively, represent the discharge locations of the Tower 102 and Tower 96 effluent water (i.e., the inlets to the South Recharge Basins and West Recharge Basins, respectively).

3.2 Remedial System Pumpage and Discharge

Table 1 summarizes the remedial well pumpage (with comparison to design criteria) for the current period and Year 2014. For the current period, Remedial Wells 1, 3R, 17, 18, and 19 collectively pumped approximately 556 million gallons (MG) of groundwater, which is equivalent to 105 percent of the design remedial well pumpage volume (531 MG). For Year 2014, the remedial system pumped approximately 1,905 MG, equivalent to 96 percent of the total design remedial well pumpage volume (1,986 MG). Additional details are provided in **Table 1** and in Section 3.3.

Based on measurements collected by ARCADIS for the current period, the South Recharge Basins collectively received the treated effluent discharge from Tower 102 along with incidental stormwater runoff and minor contribution of treated effluent from Tower 96 for a total average of approximately 2,203 gpm, equivalent to 307.7 MG. For Year 2014, a total of 1,037 MG was collectively received by the South Recharge Basins, equivalent to 89 percent of the total design South Recharge Basins volume (1,166 MG). The reduced total volume is related to Well 1, Well 17 and Well 19 downtimes. Additional details are provided in **Table 1** and Section 3.3.

Based on raw water consumption information provided by Calpine Energy (Calpine) to Northrop Grumman, the weighted average facility demand by Calpine for this period was 234 gpm, equivalent to 32.3 MG. Subtraction of the flows to the South Recharge Basins and to Calpine Energy from the total flow to Tower 96 (from Wells 1 and 3R) resulted in the calculation that the West Recharge Basins received an average treated effluent discharge rate from Tower 96 of approximately 1,539 gpm this period, equivalent to 215 MG. For Year 2014, a total of 762 MG was collectively received by the West Recharge Basins. There is no design volume for the West Recharge Basins as noted in **Table 1**.

3.3 Troubleshooting/Maintenance Activities

During 2014, some minor short-term repairs, testing of new component systems, and temporary power outages were noted (in previous quarterly reports and **Table 1** for the fourth quarter of 2014) pertaining to the on-site portion of the OU2 Groundwater Remedy. Some non-routine shut down activities due to key troubleshooting and maintenance activities that took place during the year 2014 include:

- Replacement of a malfunctioning variable frequency drive (VFD), faulty motor cable pigtail, and the submersible pump drop pipe at Well 1 was completed (July 2014 through September 2014).
- Installation of a new pump and submersible motor, drop pipe, VFD and appurtenances in Well 19 was completed (February 2014 through April 2014).
- Well 17 was inspected and upgraded to include the installation of a new pump and submersible motor (replacing the existing vertical turbine pump), new drop pipe, VFD and appurtenances (November 2014 through January 2015).

4. Groundwater Flow

During 2014, hydraulic monitoring was performed semi-annually, specifically on June 5 and June 6, 2014 and on October 2 and October 3, 2014 and **Tables 3 and 4** provide the Second and Fourth Quarter 2014 water-level measurement data, respectively. **Table 5** summarizes vertical hydraulic gradients for key monitoring well pairs in the vicinity of the OU2 ONCT system, which were calculated using the June 2014 water-level measurements, and compares these gradients to model-predicted gradients (both direction and magnitude). **Figures 2 and 3** depict groundwater elevations and flow directions in the Shallow/Intermediate zones and Deep2 (D2) zone, respectively, during operation of the OU2 ONCT system.

In general, “mounding”, as a result of the discharge of treated water to on-site recharge basins, is expected to be evident in the Shallow/Intermediate zones of the aquifer, and “cones of depression”, in response to remedial well pumpage, are expected to be most clearly evident in the Deep2 zone where the remedial wells are screened. Under these conditions, groundwater flow in the vicinity of the OU2 ONCT system is generally expected to be vertically downward from the shallower portions of the aquifer to the deeper portions of the aquifer toward the remedial wells.

Hydraulic monitoring results obtained during this reporting period are consistent with prior years and continue to indicate that the OU2 ONCT system is providing hydraulic containment of VOCs in groundwater beneath the Site. **Figure 2** shows that mounding of the water table exists in the Shallow/Intermediate zones, extending beneath the South Recharge Basins and across the Site southern boundary. Additionally, data summarized in **Table 5** indicate vertical hydraulic gradients in Shallow/Shallow, Shallow/Intermediate, Shallow/Deep, Deep/Deep2, Deep2/Deep2, and Deep 2/Deep 3 wells pairs are oriented downward (with the exception of only two pairs: GM-15S/GM-15I and GM-74D2/GM-74D3), consistent with expectations and model-predicted directions (i.e., groundwater model used to support the design of the OU2 ONCT system). The mounding and downward vertical gradients described above force shallower groundwater vertically downward into the Deep2 zone, where it is extracted by the ONCT remedial wells. **Figure 3** shows that the ONCT remedial wells have developed a collective zone of capture in the Deep2 zone that extends approximately 500 feet downgradient of the Site (see groundwater divide depicted on Figure 3). In summary, 2014 hydraulic monitoring data indicate collectively that the mounding, downward vertical gradients, and the Deep2 capture zone resulting from the operation of the OU2 ONCT system prevents the off-site migration of VOC-impacted groundwater.

5. Groundwater Quality

This report section describes the analytical results of the various groundwater quality monitoring activities conducted during the second quarter of 2014 (annual frequency round) (see **Tables 6 through 13** for summary of results) and the fourth quarter of 2014 (semi-annual frequency round) (see Appendix B for tabulated data summaries). **Figures 4 through 17** provide concentration trends over time for the relevant constituents to assess long term trends, where applicable, for the period of record.

5.1 Volatile Organic Compounds

The evaluation of VOC concentrations is presented here considering the following factors: (1) proximity to the hydraulic barrier formed by the on-site portion of the OU2 groundwater remedy (i.e., upgradient, along the Northrop Grumman site southern boundary, and downgradient of the hydraulic barrier), (2) hydrogeologic zone (i.e., Shallow/Intermediate, Deep, Deep2, and Deep 3 zones), and (3) NYSDEC Standards, Criteria, and Guidance (SCGs) Values.

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As mentioned above, results of the routine annual frequency monitoring round (completed in the second quarter of 2014) and the semi-annual frequency monitoring round (completed in the fourth quarter of 2014) are used to evaluate VOC groundwater quality for the reporting period. (Note that results from outpost well monitoring conducted quarterly are discussed [and summarized] separately in Section 5.2) **Tables 6 through 10** summarize VOCs for the second quarter of 2014 by hydrogeologic zone and the results are compared to applicable NYSDEC SCGs. **Table B1 of Appendix B** summarizes VOCs for the fourth quarter of 2014 and the results are compared to applicable NYSDEC SCGs. Additionally, time-concentration graphs depicting the long-term TVOC concentration trends in key wells grouped by proximity to the hydraulic barrier created by operation of the OU2 ONCT system are shown on **Figures 4 through 10**. These data trend graphs include key wells with detectable concentrations of VOCs that were sampled in 2014.

As on-site hydraulic containment continues and the off-site migration of VOCs is prevented, on- and off-site groundwater quality is expected to improve over time. In the area immediately south of the hydraulic barrier, a clean water front is expected to develop, which will cause the eventual bifurcation of the VOC impacts (i.e., development and growth of a zone of groundwater with trace or no detectable VOCs downgradient of the Site southern boundary). Further south, in the more distal portions of the off-site VOC impacts, improving groundwater quality would also be expected over time as a result of continued on-site containment, as well as the natural processes of dispersion, adsorption, and biodegradation. However, the VOC impacts exceeding SCGs in these further downgradient areas are expected to continue in the short-term due to the off-site migration of VOC-impacted groundwater from the Site prior to the startup of the OU2 ONCT system.

5.1.1 Shallow and Intermediate Zones

As shown in **Tables 6 and 7** and **Table B1 of Appendix B**, shallow and intermediate monitoring wells located near or immediately downgradient of the Site southern boundary (GM-20I, GM-21S, GM-21I, GM-74I, GM-78S, GM-78I, and N-10631) exhibited no SCG exceedances for VOCs in 2014. Generally, the majority of shallow and intermediate monitoring wells located on-site and upgradient of the Site southern boundary (GM-15S, GM-15I, GM-17I, GM-18I, HN-40S, HN-40I, HN-42S, and HN-42I) exhibited no SCG exceedances for VOCs in 2014. A few of the upgradient wells (FW-03 and HN-24I) exhibited SCG exceedances for VOCs, including 1,1-dichloroethene, tetrachloroethylene (PCE) and/or trichloroethylene (TCE). These two wells are located within the capture zone of the ONCT system; therefore, groundwater in this area is

hydraulically contained and, over time, will be extracted and treated. Additionally, upgradient well HN-24I shows an overall decreasing TVOC concentration trend since startup of the OU2 ONCT system (**Figure 6**).

The groundwater quality data confirms that the operation of the OU2 ONCT system has formed an effective hydraulic barrier that prevents the off-site migration of VOC-impacted groundwater in the shallower portions of the aquifer.

5.1.2 Deep/Deep 2 Zones and Remedial Wells

2014 groundwater quality data indicate SCG exceedances for VOCs exist on-site and in wells located further downgradient of the hydraulic barrier in the off-site portion of the groundwater where VOC impacts are not actively remediated. However, an overall downward trend in VOC concentrations over time exists in Deep/Deep2 zone wells upgradient of the OU2 ONCT system and in off-site areas, further downgradient of the Site. Data summarized in **Tables 8 and 9 and Table B1 of Appendix B**, as well as VOC trend graphs depicted on **Figures 4 through 9**, support these findings as follows:

- Well GM-13D is located on-site and upgradient of the OU2 ONCT system in the Deep zone (**Figure 1**). This well exhibits an overall downward trend in TVOC concentrations (**Figure 6**), with current concentrations representing a reduction in VOC concentrations of greater than 87 percent since the beginning of record.
- For the OU2 ONCT system remedial wells, TVOC concentrations ranged from 79 µg/L (Well 18) to 750 µg/L (Well 1) in the current period and ranged from 69 µg/L (Well 18) to 780 µg/L (Well 1) during the reporting period (**Table 2**). When Well 3R was brought online in December 2013 to replace Well 3, due to decreasing specific capacity of Well 3 which was indicative of imminent well failure, Well 3R exhibited lower TVOC concentrations upon start-up than Well 3 concentrations observed prior to the replacement (**Figure 4**). The flow rate for Well 3R was increased in July 2014 from 700 to 1,000 gallons per minute to enhance additional VOC mass removal at Well 3R, in part through re-orientation of groundwater flow paths. This resulted in a steady increase in TVOC concentrations at Well 3R through the remainder of 2014. A portion of VOC mass formerly captured by Well 3 and located south of Well 3R's individual capture zone has migrated downgradient and is being captured by Well 1. Thus, Well 1 exhibits an associated increase in TVOC concentrations in 2014 above the relatively stable TVOC concentrations since 2007 (**Figure 4**). With the exception of Well 19, the remaining remedial wells (Wells 17 and 18) exhibit either a declining trend since late 2000 (Well 18) or a

stable trend since mid-2008 (Well 17) (**Figures 5 and 4**, respectively). Well 19 has exhibited an overall increasing trend in TVOC concentrations until early 2012 and since then has begun to decline.

- Deep zone monitoring wells located on-site along or upgradient of the Site southern boundary (e.g., GM-15D, GM-17D, GM-18D, GM-74D, and GM-39DA) and Deep zone monitoring wells located immediately downgradient of the Site southern boundary (e.g., Wells N-10627, GM-20D, and GM-21D) exhibited no SCG exceedances for VOCs during 2014. Monitoring Well GM-79D, also located immediately downgradient and southeast of the Site in the Deep zone, exhibited SCG exceedances of TCE; however, the trend in VOC concentrations remains downward over time in this well (**Figure 7**).
- **Figure 4** depicts TVOC concentration trends for Deep2 zone wells along the southern and southwestern boundary of the Site. While SCG exceedances for VOCs during 2014 are noted for monitoring wells GM-33D2 and GM-73D2 (**Table 9 and Table B1 of Appendix B**), the overall long-term trends in these wells are downward with stable trends since approximately 2009. Current concentrations in Wells GM-33D2 and GM-73D2 represent an approximate reduction in VOC concentrations of greater than 99 percent since 1999, and 96 percent since 2002, respectively.
- **Figure 5** depicts TVOC concentration trends for Deep and Deep2 zone wells along the southern and southeastern Site boundaries. While SCG exceedances for VOCs during 2014 are noted for some of these Deep2 zone monitoring wells (**Table 9 and Table B1 of Appendix B1**), continued long-term trends are relatively stable for these wells. Following an initial decreasing trend through 2005, Well GM-73D also exhibits a current stable trend.
- **Figures 8 and 9** depict TVOC concentrations trends for Deep and Deep2 zone wells further downgradient of the Site to the southeast and to the south, respectively, in off-site areas of VOCs in groundwater that are not actively remediated. While SCG exceedances for VOCs during 2014 are noted for some of these Deep and Deep2 zone monitoring wells (**Tables 8, 9 and Table B1 of Appendix B**), these wells continue to exhibit stable to decreasing TVOC concentration trends (e.g., GM-34D, GM-35D2, GM-70D2, and GM-75D2).
- **Figure 10** depicts TVOC trends for Deep and Deep2 zone wells in the GM38 Area, located further downgradient and southeast of the Site. OM&M reports for the GM-

38 Area Remedy are submitted to NYSDEC by the Navy under separate cover. The TVOC concentrations in the off-site wells GM-38D and GM-38D2 have decreased since mid-2006 and 2002, respectively. Concentrations have continued to decrease since the startup of the GM-38 Area remedial system in September 2009, with the TVOC concentrations in 2014 close to or at the lowest levels observed for the period of record for these wells.

In summary, the groundwater quality data from the Deep/Deep 2 zones and OU2 ONCT system remedial wells continues to support the interpretation of the hydraulic data and confirm that the operation of the OU2 ONCT system has formed an effective hydraulic barrier that prevents the off-site migration of VOC-impacted groundwater in the Deep and Deep2 zones and that groundwater quality off-site in the deeper portions of the aquifer is improving over time. Groundwater quality data from the Deep and Deep2 zones indicate that bifurcation of the VOC impacts has occurred or is occurring, as expected similar to previous years and as documented for Year 2013 (ARCADIS 2014d). In the Deep zone, the occurrence of bifurcation is supported by the lack of SCG exceedances for VOCs in monitoring wells located with the capture zone immediately off site; in this area in the Deep2 zone, the majority of monitoring wells exhibit stable to decreasing trends in VOCs. Furthermore, on-site/upgradient wells are located within the capture zone of the remedial wells (which are screened in the Deep2 zone) and, therefore, VOC-impacted groundwater exceeding SCGs in this area is hydraulically contained and over time will be extracted and treated by the OU2 ONCT system.

5.1.3 Deep 3 Zone

Groundwater monitoring data from the Deep3 zone are summarized in Table 10 and include detected VOCs for recently-installed monitoring well TT-101D2, which was recently incorporated into the program for downgradient monitoring of the distal portion (off-site) of the VOC impacts (**Figure 1**).

TT-101D2 exhibits exceedances of SCGs for VOCs (TCE and Freon 113) similar to other wells installed at this well cluster above the Deep2 zone (e.g., TT-101D and TT-101D1) as shown on **Table 10 and Table B1 of Appendix B**. Generally, the results are consistent with concentrations expected in the off-site portion of the VOC impacts in groundwater not actively remediated.

5.2 Outpost Monitoring

The results of the Fourth Quarter 2014 outpost well monitoring round, relative to applicable SCGs, are provided in **Appendix B (Table B3)** and are summarized below. In 2014, samples were not collected from BPOW4-1 and BPOW4-2 due to well abandonment/construction activities by Navy. The results for the fourth quarter of 2014 are also compared to the other quarterly data for the reporting period. Reports for the other three quarterly data rounds were provided to Northrop Grumman Corporation at the end of each quarter of 2014 (ARCADIS 2014a, ARCADIS 2014b and ARCADIS 2014c). **Table 11** summarizes the data from the second quarter of 2014 relative to applicable SCGs. **Figures 14 through 17** are trend graphs for all the outpost wells through the period of record for these wells.

The complete descriptions of the procedures followed to collect groundwater samples from the outpost wells and to evaluate and document the results is provided in the PWSCP (ARCADIS G&M, Inc. 2003). Originally, there were a total of nine outpost monitoring wells (BPOW1-1, BPOW1-2, BPOW1-3, BPOW2-1, BPOW2-2, BPOW3-1, BPOW3-2, BPOW4-1, and BPOW4-2) with trigger values established for seven of the wells in accordance with the PWSCP. Established trigger values for some of the nine original outpost wells were exceeded (as summarized in previous Annual Groundwater Monitoring Reports and noted in **Table B3 of Appendix B**). Currently there are a total of 15 outpost wells, and the six newest outpost wells (BPOW1-4, BPOW1-5, BPOW1-6, BPOW2-3, BPOW3-3, and BPOW3-4) did not have trigger levels established. As such, results for the second and fourth quarters of 2014 are compared to applicable SCGs as discussed below:

- VOCs were not detected in outpost wells BPOW1-3, BPOW 1-4, BPOW 1-5, BPOW1-6, BPOW2-1, BPOW2-2, BPOW2-3, BPOW3-1, BPOW3-2, and BPOW 3-3 during the fourth quarter 2014 (**Table B3 of Appendix B**). This is generally consistent with the previous quarterly data for the reporting period, including the second quarter of 2014 (Table 11); however, in the second quarter of 2014 VOCs were also not detected in well BPOW1-2. Trend graphs (**Figure 14, 15 and 16**) also indicate a decreasing or stable trend in total VOCs for all wells except well BPOW3-4, which shows an increasing trend for the period of record of these wells.
- VOCs were detected in outpost well BPOW1-1 (**Table B3 of Appendix B**) below their respective SCGs, but above the TVOC outpost trigger value. This result is consistent with the previous quarterly data for the reporting period, including the second quarter of 2014 (**Table 11**). As indicated above (and noted in **Table B3 of**

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Appendix B), notification and reporting of the initial trigger value exceedance for this well, as outlined in the PWSCP (ARCADIS G&M, Inc. 2003), was performed prior to 2014.

- VOCs were detected in outpost well BPOW1-2 in the fourth quarter of 2014 unlike the other quarters during the reporting period. VOCs detected in BPOW1-2 in the fourth quarter of 2014 are below their respective SCGs but above the TVOC outpost trigger value. As indicated above (and noted in **Table B3 of Appendix B**), notification and reporting of the initial trigger value exceedance for this well, as outlined in the PWSCP (ARCADIS G&M, Inc. 2003), was performed prior to 2014.
- Well BPOW3-4 also had detections of site-related VOCs with only TCE exceeding its SCG (**Table B3 of Appendix B**). This data is consistent with the other quarterly data for the reporting period. No trigger value was established for this well.
- VOC data for wells BPOW4-1 and BPOW4-2 are not available for the reporting period (Year 2014). However, **Figure 17** shows the general trend of total VOCs in these two wells through the period of record and indicates a stable trend for well BPOW4-1 until early 2009 when an increasing trend begins. Well BPOW4-2 shows a similar stable trend until early 2010 when an increasing trend begins. These two wells were abandoned by the Navy in 2014. Navy completed installation of replacement wells BPOW4-1R and BPOW4-2R, at slightly different locations than the original wells, during the last quarter of 2014. Sampling of these replacement wells as part of the outpost well groundwater monitoring program will be initiated in 2015 to resume monitoring in this specific area.

Because trigger value exceedances have already been reported according to the PWSCP and as well head treatment has or will be installed at all four well fields monitored by the outpost wells, the original outpost wells have met the goal of the PWSCP (ARCADIS G&M, Inc. 2003) and they, along with the six new outpost wells, will be re-purposed, upon NYSDEC's approval of the associated recommendation outlined in Section 7. These outpost wells, will now serve to provide data to evaluate trends in VOCs upgradient of the public water supply wells.

5.3 Vinyl Chloride Monomer

Vinyl chloride monomer (VCM) was detected in Northrop Grumman Remedial Well 3R during the reporting period (Year 2014) but was not detected in the other remedial wells or monitoring wells sampled this period. Implementation of groundwater

remediation to address VCM upgradient (northwest) of Well 3 and Well 3R is currently underway by Occidental Chemical Corporation (OCC) under USEPA oversight.

5.4 GM-38 Area Groundwater Remedial Action

In 2009, the Navy commenced operation of the GM-38 Area Groundwater Remedy, consisting of Wells RW-1 and RW-3 that were designed to pump at a combined rate of 1,100 gpm. Periodic OM&M reports are being prepared by the Navy and submitted to NYSDEC under separate cover describing the environmental effectiveness and operational compliance sampling activities for the GM-38 Area system. Water quality results for wells monitored by Northrop Grumman near the GM-38 Area Groundwater Remedy are discussed in Section 5.1.2.

5.5 Cadmium and Chromium

Cadmium and chromium analytical results for the second quarter of 2014 are provided in **Table 12** and for the fourth quarter of 2014 in **Table B2 of Appendix B**. Trends in total cadmium concentrations near former Northrop Grumman Plant 2 are shown on Figure 11. Trends in total chromium concentrations near former Northrop Grumman Plants 2 and 1 are shown on **Figures 12 and 13**, respectively.

- Exceedances of the SCG for cadmium were not detected in monitoring wells GM-78S and GM-78I; however exceedances of the SCG were noted in 2014 for well N-10631 (**Figure 11**).
- Chromium did not exceed the SCG near the former Northrop Grumman Plant 2 in 2014 (**Figure 12**). Monitoring Wells GM-78S, GM-78I, and N-10631 continued to exhibit consistent decreasing or stable trends (**Figure 12**).
- Since late 2010, the chromium concentration trends in Monitoring Wells GM-15S and PLT1MW-06 near the former Northrop Grumman Plant 1 have been stable to decreasing while Monitoring Well PLT1MW-05 appears to be showing an upward trend over this same time period (**Figure 13**). However, since late 2008, wells PLT1MW-05 and GM-15S have exhibited a higher degree of variability in chromium concentrations over time making a determination of trends less certain. There have been no detections of chromium in Well PLT1MW-04 since mid-2005 (**Figure 13**).

5.6 Tentatively Identified Compounds

Consistent with reporting during previous Annual Groundwater Monitoring Reports, this section summarizes Tentatively Identified Compounds (TICs). Two unknown TICs were detected in outpost monitoring well BPOW 1-4 and one unknown TIC was identified in outpost monitoring well BPOW 1-5 during the fourth quarter of 2014. TICs were not detected in any other monitoring wells during 2014. These results continue to indicate no discernible trends in TIC detections.

5.7 QA/QC Samples and Data Validation

The results of analysis of QA/QC (field blank and trip blank) samples from the second quarter is provided in **Table 13** and for the current period (fourth quarter of 2014) is provided in **Table B4 of Appendix B**.

ARCADIS performed validation of all groundwater quality data following the contract laboratory program and by applying relevant NYSDEC and USEPA protocols. The quality of the data is considered acceptable with the qualifications indicated on **Table 2, Tables 6 through 12, and Tables B1 through B3 (Appendix B)**.

6. Conclusions

ARCADIS has evaluated the hydraulic and groundwater quality data collected during 2014, and concludes that the on-site portion of the OU2 Groundwater Remedy (ONCT system) is operating as expected and hydraulic containment of the on-site portion of the VOC-impacted groundwater continues in a manner consistent with previous years. Shallow and intermediate wells on-site or near the southern boundary of the Northrop Grumman site exhibit few SCG exceedances, indicating a general lack of VOC impacts on-site in these zones. Additionally, the off-site water quality data from wells immediately downgradient of the hydraulic barrier have demonstrated discernable downward trends over time and continue to show no or trace VOC concentrations or decreasing VOC concentration trends. Groundwater quality data indicates that bifurcation of the VOC plume is continuing in the Deep and Deep2 zones south of the hydraulic barrier.

Additionally, based on review of remedial well and system performance monitoring for the OU2 ONCT system, ARCADIS concludes the following:

- The OU-2 ONCT groundwater extraction and treatment system generally operated as designed and extracted on-site contaminated groundwater to prevent it from migrating off-site.
- The OU2 ONCT system's effluent water met NYSDEC regulatory requirements during the reporting period.

Because trigger value exceedances have already been reported according to the PWSCP and as well head treatment has or will be installed at all four well fields monitored by the outpost wells, the original outpost wells have met the goal of the PWSCP (ARCADIS G&M, Inc. 2003) and they, along with the six new outpost wells, will be re-purposed, upon NYSDEC's approval of the associated recommendation outlined in Section 7. These outpost wells, will now serve to provide data to evaluate trends in VOCs upgradient of the public water supply wells.

Based on the results of monitoring of cadmium and chromium at Plant 2 and chromium monitoring at Plant 1, ARCADIS concludes the following:

- Cadmium and chromium impacts to groundwater from Plant 2, although somewhat variable in concentration, remain limited to on-site areas with generally decreasing or stable trends.
- Chromium impacts to groundwater from Plant 1 generally have been stable since 2010, however some variability in concentrations is noted for several wells making determination of trend less certain.

7. Recommendations

Based on the findings and conclusions made in this report, ARCADIS recommends the following changes to the OU2 Groundwater Monitoring Plan, effective in 2015 pending NYSDEC approval:

- Supplement the OU2 groundwater monitoring program by adding six monitoring wells (Monitoring Wells MW 3-1, GM-21D2, GM-78D, GM-78D2, GM73D3, and GM-74D3) to the semiannual hydraulic and groundwater quality monitoring rounds as previously recommended in the 2013 Period Review Report (ARCADIS 2014d) and incorporated into the May 2014 Groundwater Monitoring Plan (ARCADIS 2014e).

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Operable Unit 2
Northrop Grumman Systems
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Bethpage, New York
NYSDEC Site # 1-30-003A

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- Change the sampling frequency of the 15 outpost wells to semi-annual, commencing with the next semi-annual sampling event in 2015. In addition, change the analytical method to USEPA Method 8260C, which is consistent with other VOC plume monitoring wells. These changes were previously recommended in the 2013 Periodic Review Report (ARCADIS 2014d).

8. References

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Operable Unit 2
Northrop Grumman Systems
Corporation
Bethpage, New York
NYSDEC Site # 1-30-003A

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Tables

Table 1. Operational Summary for the On-Site Portion of the Operable Unit 2 Groundwater Remedy, Fourth Quarter 2014, Year 2014, and Period of Record
 Northrop Grumman Systems Corporation, Bethpage, New York. ⁽¹⁾

Identification	Quarterly Flow Rates (gpm)		Quarterly Flow Volumes (MG)			Annual Flow Volumes (MG)			Quarterly VOC Concentrations (µg/L)		VOC Mass Removed (lbs) ⁽⁷⁾		
	Design ⁽²⁾	Average ^(3,4,16)	Design ⁽²⁾	Actual ^(3,4)	% of Design	Design ⁽²⁾	Actual ^(3,4,16)	% of Design	TCE ⁽⁵⁾	TVOC ^(5,6)	Quarterly	Annual	Cumulative
<u>Influent Groundwater</u>													
Well 1 ⁽¹¹⁾	800	809	111.7	109.6	98%	418.2	342.6	82%	695	750	687	1,774	38,087
Well 3R ⁽¹²⁾	700	1,014	97.8	138.8	142%	365.9	432.0	118%	394	500	568	1,243	84,446
Well 17 ⁽¹³⁾	1,000	1,003	139.7	122.0	87%	522.7	494.6	95%	191	240	240	936	50,834
Well 18 ⁽¹⁴⁾	600	646	83.8	83.0	99%	313.6	304.7	97%	56.6	79	54	188	5,708
Well 19 ⁽¹⁵⁾	700	778	97.8	102.1	104%	365.9	330.7	90%	174	210	175	555	6,880
Total	3,800	4,250	531	556	105%	1,986	1,905	96%	--	--	1,724	4,696	185,955
<u>Effluent Groundwater</u> ⁽⁸⁾													
Calpine	100 - 400	234	--	32.3	--	--	103.5	--	--	--	--	--	--
OXY Biosparge ⁽¹⁰⁾	2 - 42	3.6	--	0.5	--	--	2.0	--	--	--	--	--	--
West Recharge Basins	1,112 - 1,455	1,539	--	215.0	--	--	762.5	--	--	2.53	--	--	--
South Recharge Basins ⁽¹⁷⁾	2,231	2,203	311.6	307.7	99%	1,166.2	1,036.6	89%	--	1.46	--	--	--
Total	--	3,980	--	556	--	--	1,905	--	--	--	--	--	--
<u>Treatment Efficiencies</u> ⁽⁹⁾													
Tower 96 System Efficiency:	99.4%												
Tower 102 System Efficiency:	>99.9%												

See footnotes on next page

Table 1. Operational Summary for the On-Site Portion of the Operable Unit 2 Groundwater Remedy, Fourth Quarter 2014, Year 2014, and Period of Record Northrop Grumman Systems Corporation, Bethpage, New York. ⁽¹⁾

Notes:

- (1) Quarterly reporting period: September 30, 2014 through January 05, 2015. Annual reporting period: January 07, 2014 through January 05, 2015.
- (2) "Design" flow rates were determined for the five remedial wells and for the South Recharge Basins based on computer modeling (ARCADIS G&M, Inc. 2003c, modified in April 2005). Flow rates for Calpine, OXY Biosparge and West Recharge Basins are typical flow rates and are provided for reader information. "Design" flow volumes represent the volume of water that should be pumped/discharged during the reporting period and is calculated by multiplying the design rate by the reporting period duration.
- (3) "Average" flow rates for the remedial wells represent the average actual pumping rates when the pumps are operational and do not take into account the time that a well is not operational. During this quarterly reporting period, the remedial wells operated for the following percentage of the time: Well 1 (97%), Well 3R (98%), Well 17 (87%), Well 18 (92%), and Well 19 (94%). During this annual reporting period, the remedial wells operated for the following percentage of the time: Well 1 (81%), Well 3R (94%), Well 17 (90%), Well 18 (92%), and Well 19 (81%). "Actual" volumes are determined via totalizing flow meters.
- (4) "Average" flow rates for the system discharges represent the average flow rate during the entire reporting period and are determined by dividing the total flow during the reporting period by the reporting period duration. The Calpine and South Recharge Basins flow volumes are determined via totalizing flow meters. The West Recharge Basin flow is calculated by subtracting the cumulative flow to the other discharges from the total influent flow. Actual flow to the recharge basins is greater than shown because storm water combines with the plant effluent prior to discharge to the recharge basins.
- (5) The TCE and TVOC concentrations for the remedial wells are from the quarterly sampling event performed on November 13, 2014 (Table 2).
- (6) The TVOC concentration for the two sets of recharge basins are their respective average monthly SPDES concentration for the 4th Quarter 2014.
- (7) VOC Mass Removed for the reporting period is calculated by multiplying the TVOC concentration from the quarterly sampling event and the quantity of water pumped during the reporting period.
- (8) There are five discharges for the effluent groundwater: South Recharge Basins, West Recharge Basins, Calpine, OXY Biosparge system, and minor losses (pipe loss, irrigation use). Treated water is continuously discharged to the south and west recharge basins, and is available "on-demand" to both the Calpine Power Plant (Calpine) for use as make-up water, and the biosparge remediation system operated by Occidental Chemical (OXY Biosparge).
- (9) Treatment System Efficiencies are calculated by dividing the difference between the influent and effluent TVOC concentrations by the influent concentration.
- (10) The flow rate and volume for OXY Biosparge system were estimated based on the average pumping rate calculated from data from April 2007 through March 2012.
- (11) Well 1 was off-line from July 28, 2014 to September 15, 2014. The Well 1 totalizing flowmeter was malfunctioning prior to July 28, 2014 and starting at the end of February 2014. For the times when the flowmeter was malfunctioning, the total flow was calculated by taking the difference in the Tower 96 Influent and the Well 3R totalizing flowmeter between weekly readings. When the flowmeter was functioning, the total flow was calculated by taking the difference between weekly readings. Well 1 was off-line due to following reasons: (i) faulty connection between cable and pump motor, (ii) malfunctioning VFD circuit board, (iii) replacement of the VFD circuit board, and (iv) replacement of the drop pipe.
- (12) A Well 3R pilot study was started on July 14, 2014 in an effort to increase the VOC mass removal through an increased pumping rate to approximately 1,000 gpm. The TVOC concentration and mass removal have increased since the initiation of the pilot study. Well 3R was brought online December 2013 to replace Well 3 due to decreasing specific capacity at Well 3 indicative of imminent well failure.
- (13) At various times during the 4th Quarter of 2014, the totalizing flowmeter at Well 17 was malfunctioning. During the times when the flowmeter was malfunctioning, the total flow was calculated by taking the difference in the Tower 102 Influent and the Well 18 and Well 19 totalizing flowmeters between weekly readings. Well 17 was off-line more than 5 intermittent days in the second half of November (for the replacement of the vertical turbine pump with a submersible pump and motor and for well inspection activities), and approximately 3 intermittent days in the middle of December (for the replacement of the drop pipe and a temporary relocation of the motor starter).
- (14) Well 18 had multiple shutdowns from the beginning of April through May 2014 due to the VFD electrical panel overheating and to install a new VFD panel cooling fan.
- (15) No sample was collected from Well 19 during the 1st Quarter of 2014 as the well was shutdown for the installation of a new submersible pump and appurtenances from February 11, 2014 to March 12, 2014. The sample results from the 4th Quarter of 2013 were used to approximate for mass removal during the 1st Quarter of 2014. Well 19 was shutdown from April 22, 2014 to April 30, 2014 for the installation a new VFD, modification of the well head and installation of a new pump, motor, drop pipe and appurtenances. Well 19 was brought back online on May 1, 2014 at 757 gpm.
- (16) Total pumpage/recharge rates are accurate to +/- 15% due to limitations in metering. All flowmeters are scheduled to be calibrated during 2015.
- (17) Flow to the South Basin reported for this quarterly reporting period was below the design rate due to downtime for Well 17 (see note 13).

Acronyms:

--	Not Available or Not Applicable	gpm	gallons per minute	SPDES	State Pollutant Discharge Elimination System
TVOC	Total Volatile Organic Compounds	TCE	Trichloroethene	NG	Northrop Grumman Systems Corporation
µg/L	micrograms per liter	lbs	pounds	NYSDEC	New York State Department of Environmental Conservation
OU2	Operable Unit 2	MG	Million Gallons	VPGAC	Vapor Phase Granular Activated Carbon
		VOC	Volatile Organic Compounds	VFD	Variable Frequency Drive

Table 2. Concentrations of Volatile Organic Compounds in Groundwater Remedial Wells and Treatment Systems, Year 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	Well: WELL 1 Sample ID: WELL 1 Date: 2/24/2014	WELL 3R WELL 3R 2/24/2014	96 EFFLUENT 96 EFFLUENT 2/24/2014	WELL 17 WELL 17 2/24/2014	WELL 17 WELL 17 (REP) 2/24/2014	WELL 18 WELL 18 2/24/2014	102 EFFLUENT 102 EFFLUENT 2/24/2014
1,1,1-Trichloroethane	< 13	0.45 J	< 5.0	0.51 J	0.51 J	0.69 J	< 5.0
1,1,2,2-Tetrachloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
1,1,2-Trichloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
1,1-Dichloroethane	0.68 J	0.87 J	< 5.0	1.0 J	1.2 J	0.93 J	< 5.0
1,1-Dichloroethene	2.0 J	2.4 J	< 5.0	2.4 J	2.8 J	3.2 J	< 5.0
1,2-Dichloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
1,2-Dichloropropane	5.5 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
2-Butanone (MEK)	< 130	< 50	< 50	< 50	< 50	< 50 J	< 50
2-Hexanone (MBK)	< 130	< 50	< 50	< 50	< 50	< 50 J	< 50
4-methyl-2-pentanone (MIK)	< 130	< 50	< 50	< 50	< 50	< 50 J	< 50
Acetone	< 130	< 50	< 50	< 50	< 50	< 50 J	< 50
Benzene	< 1.8	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70 J	< 0.70
Bromodichloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Bromoform	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Bromomethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Carbon Disulfide	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Carbon tetrachloride	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Chlorobenzene	< 13	0.35 J	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Chloroethane	< 13	1.4 J	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Chloroform	< 13	< 5.0	< 5.0	0.33 J	0.41 J	0.25 J	< 5.0
Chloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
cis-1,2-dichloroethene	4.2 J	7.3	< 5.0	4.2 J	4.5 J	1.9 J	< 5.0
cis-1,3-dichloropropene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Dibromochloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Ethylbenzene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Methylene Chloride	1.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Styrene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Tetrachloroethene	39	38	< 5.0	32	34	12 J	< 5.0
Toluene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
trans-1,2-dichloroethene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
trans-1,3-dichloropropene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Trichloroethylene	400	98	0.39 J	190	190 D	55 J	< 5.0
Trichlorotrifluoroethane (Freon 113)	2.7 J	3.0 J	< 5.0	4.6 J	4.3 J	1.2 J	< 5.0
Vinyl Chloride	< 5.0	38	< 2.0	< 2.0	< 2.0	< 2.0 J	< 2.0
Xylene-o	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Xylenes - m,p	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 5.0
Total VOCs ⁽¹⁾	460	190	0.39	240	240	75	0

Notes and abbreviations on last page.

Table 2. Concentrations of Volatile Organic Compounds in Groundwater Remedial Wells and Treatment Systems, Year 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	Well: Sample ID: Date:	WELL 1 WELL 1 6/10/2014	WELL 3R WELL 3R 6/10/2014	96 EFFLUENT 96 EFFLUENT 6/10/2014	WELL 17 WELL 17 6/10/2014	WELL 17 REP-061014 6/10/2014	WELL 18 WELL 18 6/10/2014	WELL 19 WELL 19 6/10/2014	102 EFFLUENT 102 EFFLUENT 6/10/2014
1,1,1-Trichloroethane	< 13	0.67 J	< 5.0	0.56 J	0.48 J	0.58 J	0.43 J	< 5.0	
1,1,2,2-Tetrachloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
1,1,2-Trichloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
1,1-Dichloroethane	0.80 J	1.0 J	< 5.0	1.1 J	1.1 J	1.0 J	0.74 J	< 5.0	
1,1-Dichloroethene	1.3 J	3.2 J	< 5.0	1.8 J	1.8 J	< 5.0	0.97 J	< 5.0	
1,2-Dichloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.45 J	< 5.0	
1,2-Dichloropropane	5.7 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
2-Butanone (MEK)	< 130	< 50	< 50	< 50	< 50	< 50	< 50	< 50	
2-Hexanone (MBK)	< 130	< 50	< 50	< 50	< 50	< 50	< 50	< 50	
4-methyl-2-pentanone (MIK)	< 130	< 50	< 50	< 50	< 50	< 50	< 50	< 50	
Acetone	< 130	< 50	< 50	< 50	< 50	< 50	< 50	< 50	
Benzene	< 1.8	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	
Bromodichloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Bromoform	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Bromomethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Carbon Disulfide	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Carbon tetrachloride	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Chlorobenzene	< 13	0.29 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Chloroethane	< 13	1.2 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Chloroform	< 13	< 5.0	< 5.0	0.42 J	0.40 J	0.24 J	0.48 J	< 5.0	
Chloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
cis-1,2-dichloroethene	4.7 J	7.6	< 5.0	4.2 J	4.1 J	1.7 J	20	< 5.0	
cis-1,3-dichloropropene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Dibromochloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Ethylbenzene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Methylene Chloride	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Styrene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Tetrachloroethene	40	40	< 5.0	33	32	13	6.9	< 5.0	
Toluene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
trans-1,2-dichloroethene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	0.23 J	0.52 J	< 5.0	
trans-1,3-dichloropropene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Trichloroethylene	490	140	0.64 J	190	160 D	51	170	< 5.0	
Trichlorotrifluoroethane (Freon 113)	3.5 J	3.5 J	< 5.0	4.7 J	5	1.5 J	0.92 J	< 5.0	
Vinyl Chloride	< 5.0	36	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	
Xylene-o	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Xylenes - m,p	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Total VOCs ⁽¹⁾	550	230	0.64	240	200	69	200	0	

Notes and abbreviations on last page.

Table 2. Concentrations of Volatile Organic Compounds in Groundwater Remedial Wells and Treatment Systems, Year 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	Well: Sample ID: Date:	WELL 1 WELL 1 9/11/2014	WELL 3R WELL 3R 9/11/2014	96 EFFLUENT 96 EFF 9/11/2014	WELL 17 WELL 17 9/11/2014	WELL 17 REP091114-EE-1 9/11/2014	WELL 18 WELL 18 9/11/2014	WELL 19 WELL 19 9/11/2014	102 EFFLUENT 102 EFF 9/11/2014
1,1,1-Trichloroethane	< 13	1.0 J	< 5.0	0.53 J	0.53 J	0.72 J	0.42 J	< 5.0	
1,1,2,2-Tetrachloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
1,1,2-Trichloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
1,1-Dichloroethane	1.0 J	1.3 J	< 5.0	1.1 J	1.1 J	1.1 J	0.69 J	< 5.0	
1,1-Dichloroethene	2.4 J	5.8	< 5.0	2.8 J	1.8 J	3.1 J	1.6 J	< 5.0	
1,2-Dichloroethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.50 J	< 5.0	
1,2-Dichloropropane	5.7 J	< 5.0	0.41 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
2-Butanone (MEK)	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
2-Hexanone (MBK)	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
4-methyl-2-pentanone (MIK)	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
Acetone	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
Benzene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Bromodichloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Bromoform	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Bromomethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Carbon Disulfide	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
Carbon tetrachloride	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Chlorobenzene	< 13	0.30 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Chloroethane	< 13	1.3 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Chloroform	1.3 J	< 5.0	< 5.0	0.32 J	0.38 J	< 5.0	0.48 J	< 5.0	
Chloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
cis-1,2-dichloroethene	4.9 J	7.3	0.42 J	4.2 J	3.8 J	1.8 J	19	< 5.0	
cis-1,3-dichloropropene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Dibromochloromethane	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Ethylbenzene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Methylene Chloride	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Styrene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Tetrachloroethene	35	43	< 5.0	35	35	13	7.1	< 5.0	
Toluene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
trans-1,2-dichloroethene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
trans-1,3-dichloropropene	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Trichloroethylene	730 D	270 D	3.6 J	180 D	200	55	170	< 5.0	
Trichlorotrifluoroethane (Freon 113)	3.7 J	4.1 J	< 5.0	4.2 J	4.3 J	1.4 J	0.96 J	< 5.0	
Vinyl Chloride	< 13	36	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Xylene-o	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Xylenes - m,p	< 13	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Total VOCs ⁽¹⁾	780	370	4.4	230	250	76	200	0	

Notes and abbreviations on last page.

Table 2. Concentrations of Volatile Organic Compounds in Groundwater Remedial Wells and Treatment Systems, Year 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	Well: WELL 1 Sample ID: WELL 1 Date: 11/13/2014	WELL 3R WELL 3R 11/13/2014	96 EFFLUENT T-96 EFFLUENT 11/13/2014	WELL 17 WELL 17 11/13/2014	WELL 17 REP-111314-EE1 11/13/2014	WELL 18 WELL 18 11/13/2014	WELL 19 WELL 19 11/13/2014	102 EFFLUENT T102 EFFLUENT 11/13/2014
1,1,1-Trichloroethane	< 2.0	1.2	< 1.0	0.55 J	0.53 J	0.74 J	0.47 J	< 1.0
1,1,2,2-Tetrachloroethane	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	0.91 J	1.7	< 1.0	1.3	1.3	1.2	0.91 J	< 1.0
1,1-Dichloroethene	2.7	6.0	< 1.0	2.6	2.5	3.1	1.4	< 1.0
1,2-Dichloroethane	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.40 J	< 1.0
1,2-Dichloropropane	5.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone (MBK)	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-methyl-2-pentanone (MIK)	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Acetone	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	< 8.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Bromomethane	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	< 2.0	0.27 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	< 2.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	< 2.0	0.21 J	< 1.0	0.39 J	0.40 J	< 1.0	0.52 J	< 1.0
Chloromethane	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-dichloroethene	4.9	7.9	< 1.0	4.5	4.6	2.1	21.2	< 1.0
cis-1,3-dichloropropene	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Styrene	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene	38.5	43.6	< 1.0	35.6	35.2	13.9	7.5	< 1.0
Toluene	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-dichloroethene	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-dichloropropene	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene	695 D	394 D	3.5	191	190	56.6	174	< 1.0
Trichlorotrifluoroethane (Freon 113)	4.3 J	5.2	< 5.0	5.0	4.9 J	1.6 J	1.0 J	< 5.0
Vinyl Chloride	< 2.0	35.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylene-o	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes - m,p	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total VOCs ⁽¹⁾	750	500	3.5	240	240	79	210	0

Notes and abbreviations on last page.

Table 2. Concentrations of Volatile Organic Compounds in Groundwater Remedial Wells and Treatment Systems, Year 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Notes and Abbreviations:

- (1) Total VOCs rounded to two significant figures.
- (2) Well 19 sample was not collected during 1st Quarter 2014 as Well 19 was offline from February 11 to March 12, 2014 'due to pump replacement activities.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Bold	Constituent detected
VOCs	Volatile Organic Compounds
µg/L	Micrograms per liter
J	Constituent value is estimated
D	Concentration is based on a diluted sample analysis
REP	Field replicate
<5.0	Compound not detected above its laboratory quantification limit.
OU2	Operable Unit 2

Table 3. Water-Level Measurement Data and Remedial Well Specific Capacities, June 5 and June 6, 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point		Water-Level Elevation (ft msl)
	Elevation (ft msl)	Depth to Water (ft bmp)	
Shallow Wells⁽¹⁾			
FW-03	124.30	54.23	70.07
N-9921	94.23	31.04	63.19
N-10597	109.85	39.11	70.74
N-10600	102.41	37.12	65.29
N-10631	103.47	37.13	66.34
N-10633	103.80	38.92	64.88
N-10634	101.20	38.98	62.22
GM-15S	109.44	43.88	65.56
GM-15I	109.29	43.70	65.59
GM-16SR	115.86	45.70	70.16
GM-17I	115.83	43.59	72.24
GM-17SR	115.79	43.31	72.48
GM-18S	107.60	38.99	68.61
GM-18I	109.03	40.62	68.41
GM-19S	109.86	41.63	68.23
GM-20I	103.88	35.91	67.97
GM-21S	105.81	36.03	69.78
GM-74I	107.42	39.96	67.46
GM-78S	104.94	39.49	65.45
GM-78I	105.06	39.77	65.29
GM-79S (N-10628)	100.88	38.99	61.89
HN-24S	122.73	50.13	72.60
HN-40S	116.35	47.59	68.76
HN-40I	115.91	47.38	68.53
HN-42S	120.32	49.81	70.51
HN-42I	119.61	49.14	70.47
MW-3R	101.45	33.43	68.02
Intermediate Wells⁽¹⁾			
GM-16I	115.81	45.70	70.11
GM-19I	109.86	43.75	66.11
GM-21I	105.72	37.89	67.83
HN-24I	125.80	50.69	75.11

See Notes and Abbreviations on last page

Table 3. Water-Level Measurement Data and Remedial Well Specific Capacities, June 5 and June 6, 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point		
	Elevation (ft msl)	Depth to Water (ft bmp)	Water-Level Elevation (ft msl)
Deep Wells⁽¹⁾			
N-10624	93.61	30.70	62.91
N-10627	93.70	31.41	62.29
GM-13D	113.97	44.47	69.50
GM-15D	109.84	46.16	63.68
GM-17D	115.68	47.78	67.90
GM-18D	108.88	43.69	65.19
GM-20D	103.92	37.61	66.31
GM-21D	105.66	42.09	63.57
GM-36D	91.63	33.78	57.85
GM-37D	97.26	38.20	59.06
GM-38D	91.75	38.41	53.34
GM-39D _A ⁽²⁾	102.23	37.54	64.69
GM-70D2	99.58	40.27	59.31
GM-74D	107.43	44.27	63.16
GM-79I	101.09	39.39	61.70
GM-79D	101.25	40.65	60.60
BPOW1-1	72.00	28.43	43.57
BPOW1-2	71.82	30.49	41.33
Deep2 Wells⁽¹⁾			
GM-15D2	109.78	48.76	61.02
GM-33D2	106.85	47.99	58.86
GM-34D	71.19	13.58	57.61
GM-34D2	71.19	15.77	55.42
GM-35D2	96.28	39.37	56.91
GM-36D2	91.60	36.87	54.73
GM-37D2	97.17	39.02	58.15
GM-38D2	91.56	41.80	49.76
GM-39D _B ⁽²⁾	102.08	40.28	61.80
GM-71D2	98.45	40.89	57.56
GM-73D	104.87	42.70	62.17
GM-73D2	104.62	44.65	59.97
GM-74D2	107.36	50.32	57.04
GM-75D2	93.63	34.45	59.18
GM-78D	105.04	42.20	62.84
GM-78D2	105.05	44.28	60.77
GM-21D2	105.88	46.92	58.96

See Notes and Abbreviations on last page

Table 3. Water-Level Measurement Data and Remedial Well Specific Capacities, June 5 and June 6, 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point		
	Elevation (ft msl)	Depth to Water (ft bmp)	Water-Level Elevation (ft msl)
Deep 2 Wells⁽¹⁾			
MW 3-1	104 ⁽³⁾	54.95	49.05
TT-101D	80.89	31.89	49.00
TT-101D1	80.92	33.97	46.95
Well 1	116.78	83.41	33.37
Well 3R	104 ⁽³⁾	72.51	31.49
Well 17	104.10	64.18	39.92
Well 18	110.00	63.47	46.53
Well 19	108.70	64.64	44.06
BPOW1-3	71.92	31.03	40.89
BPOW1-4	56.68	12.67	44.01
BPOW2-1	58.64	19.84	38.80
BPOW2-2	58.50	22.52	35.98
BPOW2-3	57.98	22.58	35.40
BPOW3-1	61.43	24.75	36.68
BPOW3-2	61.82	25.98	35.84
BPOW3-3	60.64	22.60	38.04
Deep 3 Wells⁽¹⁾			
GM-73D3	104.64	44.70	59.94
GM-74D3	107.58	48.65	58.93
BPOW1-5	56.75	13.34	43.41
BPOW1-6	57.06	13.74	43.32
BPOW3-4	62.44	24.19	38.25
BPOW4-1 ⁽⁴⁾	67.34	24.23	43.11
BPOW4-2 ⁽⁴⁾	67.18	24.24	42.94
TT-101D2	80.89	34.55	46.34

Remedial Well Specific Capacities⁽⁵⁾					
Well ID	Pumping Depth to Water (ft bmp)	Static Depth to Water (ft bmp) ⁽⁶⁾	Drawdown (ft)	Second Quarter 2014 Pumping Rate (Q)(gpm) ⁽⁷⁾	Specific Capacity (Q/s)(gpm/ft)
Well 1	83.41	51.50	31.91	1500	47.01
Well 3R	72.51	52.26	20.25	706	34.86
Well 17	64.18	44.12	20.06	1046	52.14
Well 18	63.47	50.15	13.32	630	47.30
Well 19	64.64	49.13	15.51	726	46.81

Notes and Abbreviations:

- (1) Well identification (e.g., TT-101D2) does not necessarily designate the actual hydrogeologic zone. Determination of the hydrogeologic zones is based on the well screen interval and the regional model layering.
- (2) Monitoring wells were voluntarily monitored to enhance coverage in the Deep and Deep2 zones.
- (3) Surveyed elevation not available, elevation is estimated from topographic maps of the area.
- (4) BPOW 4-1 and BPOW 4-2 were not sampled due to well reconstruction activities by NAVY during the Second Quarter 2014. Only water levels were collected from the above two wells.
- (5) Specific capacity values are qualitative in nature, due to fluctuations in static water levels. Sharp declines in specific capacity could indicate the need for well redevelopment.
- (6) For Wells 17, 18, and 19, baseline static depth to water measurements were collected in 1997 prior to OU2 system start-up; baseline pumping depth to water and rate measurements (not shown) used with baseline static depth to water measurements to calculate baseline specific capacities, were collected in 1999 during OU2 system operation. For Well 1, baseline static depth to water was collected on 9/24/2012, when pump was offline due to well maintenance activities. For Well 3R, baseline static depth to water was collected on 12/2/2013, when pump was offline during well installation activities and prior to start up.
- (7) Pumping rate determined at time of pumping depth to water measurement.
- ft msl feet relative to mean sea level
 ft bmp feet below measuring point
 OU2 Operable Unit 2
 gpm gallons per minute

Table 4. Water-Level Measurement Data and Remedial Well Specific Capacities, October 2 and October 3, 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point		
	Elevation (ft msl)	Depth to Water (ft bmp)	Water-Level Elevation (ft msl)
Shallow Wells⁽¹⁾			
FW-03	124.30	55.18	69.12
N-9921	94.23	32.27	61.96
N-10597	109.85	39.63	70.22
N-10600	102.41	30.31	72.10
N-10631	103.47	38.30	65.17
N-10633	103.80	40.11	63.69
N-10634	101.20	40.13	61.07
GM-15S	109.44	45.00	64.44
GM-15I	109.29	44.80	64.49
GM-16SR	115.86	46.86	69.00
GM-17I	115.83	44.92	70.91
GM-17SR	115.79	44.64	71.15
GM-18S	107.60	40.71	66.89
GM-18I	109.03	41.84	67.19
GM-19S	109.86	42.26	67.60
GM-20I	103.88	37.17	66.71
GM-21S	105.81	37.64	68.17
GM-74I	107.42	41.02	66.40
GM-78S	104.94	40.72	64.22
GM-78I	105.06	41.01	64.05
GM-79S (N-10628)	100.88	40.27	60.61
HN-24S	122.73	51.21	71.52
HN-40S	116.35	48.64	67.71
HN-40I	115.91	48.48	67.43
HN-42S	120.32	50.81	69.51
HN-42I	119.61	50.18	69.43
MW-3R	101.45	34.88	66.57
Intermediate Wells⁽¹⁾			
GM-16I	115.81	47.04	68.77
GM-19I	109.86	43.71	66.15
GM-21I	105.72	31.18	74.54
HN-24I	125.80	51.74	74.06

See Notes and Abbreviations on last page

Table 4. Water-Level Measurement Data and Remedial Well Specific Capacities, October 2 and October 3, 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point		
	Elevation (ft msl)	Depth to Water (ft bmp)	Water-Level Elevation (ft msl)
Deep Wells⁽¹⁾			
N-10624	93.61	31.87	61.74
N-10627	93.70	32.29	61.41
GM-13D	113.97	45.57	68.40
GM-15D	109.84	47.26	62.58
GM-17D	115.68	49.19	66.49
GM-18D	108.88	44.97	63.91
GM-20D	103.92	39.01	64.91
GM-21D	105.66	41.36	64.30
GM-36D	91.63	35.42	56.21
GM-37D	97.26	39.65	57.61
GM-38D	91.75	40.16	51.59
GM-39D _A ⁽²⁾	102.23	38.75	63.48
GM-70D2	99.58	41.68	57.90
GM-74D	107.43	45.41	62.02
GM-79I	101.09	39.70	61.39
GM-79D	101.25	42.12	59.13
BPOW1-1	72.00	30.54	41.46
BPOW1-2	71.82	33.25	38.57
HN-29D	115.11	46.35	68.76
Deep2 Wells⁽¹⁾			
GM-15D2	109.78	49.75	60.03
GM-33D2	106.85	49.09	57.76
GM-34D	71.19	14.63	56.56
GM-34D2	71.19	16.61	54.58
GM-35D2	96.28	40.01	56.27
GM-36D2	91.60	38.87	52.73
GM-37D2	97.17	40.37	56.80
GM-38D2	91.56	43.62	47.94
GM-39D _B ⁽²⁾	102.08	41.45	60.63
GM-71D2	98.45	42.01	56.44
GM-73D	104.87	43.87	61.00
GM-73D2	104.62	45.77	58.85
GM-74D2	107.36	51.40	55.96
GM-75D2	93.63	35.53	58.10
GM-78D	105.04	43.44	61.60
GM-78D2	105.05	45.47	59.58
GM-21D2	105.88	41.25	64.63
MW 3-1	104 ⁽³⁾	58.41	45.59
TT-101D	80.89	33.40	47.49
TT-101D1	80.92	35.51	45.41
Well 1	116.78	84.00	32.78
Well 3R	117.78	83.66	34.12
Well 17	104.10	65.30	38.80
Well 18	110.00	64.60	45.40
Well 19	108.70	65.34	43.36
BPOW1-3	71.92	33.56	38.36
BPOW1-4	56.68	14.41	42.27
BPOW2-1	58.64	22.17	36.47
BPOW2-2	58.50	25.34	33.16
BPOW2-3	57.98	25.41	32.57
BPOW3-1	61.43	28.56	32.87
BPOW3-2	61.82	30.19	31.63
BPOW3-3	60.64	25.61	35.03

See Notes and Abbreviations on last page

Table 4. Water-Level Measurement Data and Remedial Well Specific Capacities, October 2 and October 3, 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point		
	Elevation (ft msl)	Depth to Water (ft bmp)	Water-Level Elevation (ft msl)
Deep3 Wells⁽¹⁾			
GM-73D3	105.30	45.86	59.44
GM-74D3	104 ⁽³⁾	49.75	54.25
BPOW1-5	56.75	14.81	41.94
BPOW1-6	57.06	15.24	41.82
BPOW3-4	62.44	27.48	34.96
BPOW4-1 ⁽⁴⁾	NA	NA	NA
BPOW4-2 ⁽⁴⁾	NA	NA	NA
BPOW 4-1R ⁽⁴⁾	NA	24.95	NA
TT-101D2	80.89	36.05	44.84

Remedial Well Specific Capacities⁽⁵⁾					
Well ID	<u>Pumping Depth to</u>	<u>Static Depth to Water (ft</u>	Drawdown (s) (ft)	<u>Fourth Quarter 2014 Pumping</u>	<u>Specific Capacity</u>
	<u>Water (ft bmp)</u>	<u>bmp)⁽⁶⁾</u>		<u>Rate (Q)(gpm)⁽⁷⁾</u>	<u>(Q/s)(gpm/ft)</u>
Well 1	84.00	51.14	32.86	808	24.59
Well 3R	83.66	52.66	31.00	1019	32.87
Well 17	65.30	44.12	21.18	1127	53.21
Well 18	64.60	50.15	14.45	632	43.74
Well 19	65.34	49.13	16.21	769	47.44

Notes and Abbreviations:

- (1) Well identification (e.g., TT-101D2) does not necessarily designate the actual hydrogeologic zone. Determination of the hydrogeologic zones is based on the well screen interval and the regional model layering.
 - (2) Monitoring wells were voluntarily monitored in order to enhance coverage in the Deep and Deep2 zones.
 - (3) Surveyed elevation not available, elevation is estimated from topographic maps of the area.
 - (4) BPOW 4-1 and BPOW 4-2 were not accessible due to well reconstruction activities by NAVY. These two wells were abandoned and replaced by substitute wells BPOW 4-1R and BPOW 4-2R. Depth to water was measured from one replacement well BPOW 4-1R. Measuring point is not available at this time. The other replacement well BPOW 4-2R was not installed at the time of the Fourth Quarter 2014 water level measurement round.
 - (5) Specific capacity values are qualitative in nature, due to fluctuations in static water levels. Sharp declines in specific capacity could indicate the need for well redevelopment.
 - (6) For Wells 17, 18, and 19 baseline static depth to water measurements were collected in 1997 prior to OU2 system start-up; baseline pumping depth to water and rate measurements (not shown) used with baseline static depth to water measurements to calculate baseline specific capacities, were collected in 1999 during OU2 system operation. For Well 1, baseline static depth to water was collected on 9/24/2012, when pump was offline due to well maintenance activities. For Well 3R, baseline static depth to water was collected on 12/2/2013, when pump was offline during well installation activities and prior to start up.
 - (7) Pumping rate determined at time of pumping depth to water measurement.
- ft msl feet relative to mean sea level
ft bmp feet below measuring point
OU2 Operable Unit 2
gpm gallons per minute

Table 5. Comparison of June 2014 Vertical Hydraulic Gradients to Model-Predicted Gradients, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Pair ID	Well Screen Midpoint Elevation (ft msl)	Water-Level Elevation (ft msl)	Vertical Gradient ⁽¹⁾ (ft/ft) x 10 ⁻³	Model-Predicted, OU2 Steady-State Vertical Gradient ⁽²⁾ (ft/ft) x 10 ⁻³	Increase Compared to Model-Predicted, Steady-State Vertical Gradient
Shallow-Shallow Wells ⁽³⁾					
GM-15S	34.53	65.56			
GM-15I	9.29	65.59	-1.19	51.51	-52.70
GM-17SR	50.79	72.48			
GM-17I	5.83	72.24	5.34	2.67	2.67
GM-78S	39.94	65.45			
GM-78I	5.56	65.29	4.65	1.75	2.90
Shallow-Intermediate Wells ⁽³⁾					
GM-19S	59.36	68.23			
GM-19I	-25.14	66.11	25.09	0.47	24.62
GM-21S	40.81	69.78			
GM-21I	-29.28	67.83	27.82	5.99	21.83
Shallow-Deep Wells ⁽³⁾					
GM-17I	5.83	72.24			
GM-17D	-172.32	67.90	24.36	20.43	3.93
GM-18I	9.03	68.41			
GM-18D	-186.12	65.19	16.50	19.16	-2.66
GM-20I	3.88	67.97			
GM-20D	-117.08	66.31	13.72	26.70	-12.98
GM-21I	-29.28	67.83			
GM-21D	-177.34	63.57	28.77	42.55	-13.78
GM-74I	8.42	67.46			
GM-74D	-192.57	63.16	21.39	35.13	-13.74

See Notes and Abbreviations on last page

Table 5. Comparison of June 2014 Vertical Hydraulic Gradients to Model-Predicted Gradients, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Pair ID	Well Screen Midpoint Elevation (ft msl)	Water-Level Elevation (ft msl)	Vertical Gradient ⁽¹⁾ (ft/ft) x 10 ⁻³	Model-Predicted, OU2 Steady-State Vertical Gradient ⁽²⁾ (ft/ft) x 10 ⁻³	Increase Compared to Model-Predicted, Steady-State Vertical Gradient
Deep-Deep 2 Wells ⁽³⁾					
GM-15D	-227.34	63.68			
GM-15D2		61.02	-11.70	-16.32	4.62
GM-18D	-186.12	65.19			
GM-33D2	-403.15	58.86	29.17	49.49	-20.32
GM-39D _A	-169.77	64.69			
GM-39D _B	-312.92	61.80	20.19	25.92	-5.73
GM-74D	-192.57	63.16			
GM-74D2	-444.64	57.04	24.28	37.81	-13.53
Deep 2-Deep 2 Wells ⁽³⁾					
GM-73D	-301.13	62.17			
GM-73D2	-437.38	59.97	16.15	23.85	-7.70
Deep 2-Deep 3 Wells ⁽³⁾					
GM-74D2	-444.64	57.04			
GM-74D3	-527.42	58.93	-22.83	-37.49	14.66
GM-73D	-301.13	62.17			
GM-73D3	-537.86	59.94	9.42	10.12	-0.70

Notes and Abbreviations:

- ⁽¹⁾ Vertical hydraulic gradients are calculated as follows:

$$\frac{(\text{Water-Level Elevation}_1 - \text{Water-Level Elevation}_2)}{(\text{Screen Midpoint Elevation}_1 - \text{Screen Midpoint Elevation}_2)}$$
₁ - Shallower well of pairing
₂ - Deeper well of pairing
 A positive "+" gradient value indicates a downward hydraulic gradient.
 A negative "-" gradient value indicates an upward hydraulic gradient.
- ⁽²⁾ The 2003 expanded model with subsequent 2004/2005 modifications to the ONCT System was used to calculate the Steady State Vertical Gradient.
- ⁽³⁾ Well identification (e.g., GM-73D) does not necessarily designate the actual hydrogeologic zone. Determination of the hydrogeologic zones is based on the well screen interval and the regional model layering.
- ft msl feet relative to mean sea level
 OU2 Operable Unit 2
 ONCT On-Site Containment

Table 6. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Shallow Zone ⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	FW-03	GM-15S	GM-15I	GM-17I	GM-18I
		Sample ID:	FW-03	GM-15S	GM-15I	GM-17I	GM-18I
		Sample Date:	5/19/2014	5/7/2014	6/4/2014	5/5/2014	5/19/2014
1,1,1-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	5		< 5	< 5	< 5	< 5	< 5
2-Butanone	50		< 50	< 50	< 50	< 50	< 50
2-Hexanone	50		< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 50	< 50	< 50
Acetone	50		< 50	< 50	< 50	< 50	< 50
Benzene	1		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50		< 5	< 5	< 5	< 5	< 5
Bromoform	50		< 5	< 5	< 5	< 5	< 5
Bromomethane	5		< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	50		< 5	< 5	< 5	< 5	< 5
Carbon tetrachloride	5		< 5	< 5	< 5	< 5	< 5
Chlorobenzene	5		< 5	< 5	< 5	< 5	< 5
Chloroethane	5		< 5	< 5	< 5	< 5	< 5
Chloroform	7		< 5	0.32 J	< 5	< 5	< 5
Chloromethane	5		< 5	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	5		0.30 J	< 5	< 5	< 5	< 5
cis-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	5		< 5	< 5	< 5	< 5	< 5
Ethylbenzene	5		< 5	< 5	< 5	< 5	< 5
Methylene Chloride	5		< 5	< 5	< 5	< 5	< 5
Styrene	5		< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5		33	< 5	< 5	< 5	< 5
Toluene	5		< 5	< 5	< 5	< 5	< 5
trans-1,2-dichloroethene	5		< 5	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Trichloroethylene	5		4.5 J	1.3 J	< 5	< 5	< 5
Trichlorotrifluoroethane (Freon 113)	5		< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	2		< 2	< 2	< 2	< 2	< 2
Xylene-o	5		< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	5		< 5	< 5	< 5	< 5	< 5
TVOCs			38	1.6	0	0	0

See Notes and Abbreviations on last page

Table 6. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Shallow Zone ⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	GM-20I	GM-21S	GM-74I	GM-78S	GM-78I
		Sample ID:	GM-20I	GM-21S	GM-74I	GM-78S	GM-78I
		Sample Date:	5/16/2014	6/2/2014	5/8/2014	5/15/2014	5/15/2014
1,1,1-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,1,2,2-Tetrachloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	5		< 5	< 5	< 5	< 5	< 5
2-Butanone	50		< 50	< 50	< 50	< 50	< 50
2-Hexanone	50		< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 50	< 50	< 50
Acetone	50		< 50	< 50	< 50	< 50	< 50
Benzene	1		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50		< 5	< 5	< 5	< 5	< 5
Bromoform	50		< 5	< 5	< 5	< 5	< 5
Bromomethane	5		< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	50		< 5	< 5	< 5	< 5	< 5
Carbon tetrachloride	5		< 5	< 5	< 5	< 5	< 5
Chlorobenzene	5		< 5	< 5	< 5	< 5	< 5
Chloroethane	5		< 5	< 5	< 5	< 5	< 5
Chloroform	7		< 5	< 5	< 5	< 5	< 5
Chloromethane	5		< 5	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	5		< 5	< 5	< 5	< 5	< 5
cis-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	5		< 5	< 5	< 5	< 5	< 5
Ethylbenzene	5		< 5	< 5	< 5	< 5	< 5
Methylene Chloride	5		< 5	< 5	< 5	< 5	< 5
Styrene	5		< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5		< 5	< 5	< 5	< 5	< 5
Toluene	5		< 5	< 5	< 5	< 5	< 5
trans-1,2-dichloroethene	5		< 5	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Trichloroethylene	5		0.39 J	0.37 J	0.30 J	< 5	0.58 J
Trichlorotrifluoroethane (Freon 113)	5		< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	2		< 2	< 2	< 2	< 2	< 2
Xylene-o	5		< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	5		< 5	< 5	< 5	< 5	< 5
TVOCs			0.39	0.37	0.30	0	0.58

See Notes and Abbreviations on last page

Table 6. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Shallow Zone ⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	HN-40S	HN-40I	HN-42S	HN-42I	N-10631
		Sample ID: Sample Date:	HN-40S 5/12/2014	HN-40I 5/12/2014	HN-42S 5/12/2014	HN-42I 5/12/2014	N-10631 5/15/2014
1,1,1-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	5		< 5	< 5	< 5	< 5	< 5
2-Butanone	50		< 50	< 50	< 50	< 50	< 50
2-Hexanone	50		< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 50	< 50	< 50
Acetone	50		< 50	< 50	< 50	< 50	< 50
Benzene	1		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50		< 5	< 5	< 5	< 5	< 5
Bromoform	50		< 5	< 5	< 5	< 5	< 5
Bromomethane	5		< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	50		< 5	< 5	< 5	< 5	< 5
Carbon tetrachloride	5		< 5	< 5	< 5	< 5	< 5
Chlorobenzene	5		< 5	< 5	< 5	< 5	< 5
Chloroethane	5		< 5	< 5	< 5	< 5	< 5
Chloroform	7		0.87 J	< 5	< 5	< 5	< 5
Chloromethane	5		< 5	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	5		< 5	< 5	0.50 J	< 5	0.24 J
cis-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	5		< 5	< 5	< 5	< 5	< 5
Ethylbenzene	5		< 5	< 5	< 5	< 5	< 5
Methylene Chloride	5		< 5	< 5	< 5	< 5	< 5
Styrene	5		< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5		< 5	0.32 J	< 5	< 5	< 5
Toluene	5		< 5	< 5	< 5	< 5	< 5
trans-1,2-dichloroethene	5		< 5	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Trichloroethylene	5		< 5	1.6 J	1.5 J	< 5	1.2 J
Trichlorotrifluoroethane (Freon 113)	5		< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	2		< 2	< 2	< 2	< 2	< 2
Xylene-o	5		< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	5		< 5	< 5	< 5	< 5	< 5
TVOCs			0.87	1.9	2.0	0	1.4

See Notes and Abbreviations on last page

Table 6. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Shallow Zone ⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Notes and Abbreviations:

- (1) Well identification (e.g., GM-15I) does not necessarily designate the actual hydrogeologic zone. Determination of the hydrogeologic zones is based on the well screen interval and the regional model layering.
- (2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent values are listed.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Samples analyzed for the TCL VOCs using NYSDEC ASP 2005 Method OLM 4.3.

TVOCs are rounded to two significant figures.

Bold value indicates a detection.

- NYSDEC New York State Department of Environmental Conservation
- VOCs Volatile Organic Compounds
- µg/L micrograms per Liter
- J Value is estimated concentration
- TCL Target Compound List
- TOGs Technical and Operational Guidance Series
- < 5.0 Compound not detected above its laboratory quantification limit.
- Compound detected in exceedance of NYSDEC SCG Criteria

Table 7. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Intermediate Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	GM-211	HN-24I	HN-24I
		Sample ID:	GM-211	HN-24I	REP051914
		Sample Date:	6/3/2014	5/19/2014	5/19/2014
1,1,1-Trichloroethane	5	< 5	1.1 J	1.2 J	
1,1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5	
1,1,2-Trichloroethane	5	< 5	0.25 J	0.24 J	
1,1-Dichloroethane	5	< 5	2.0 J	2.0 J	
1,1-Dichloroethene	5	< 5	7.8	8.1	
1,2-Dichloroethane	5	< 5	< 5	< 5	
1,2-Dichloropropane	5	< 5	< 5	< 5	
2-Butanone	50	< 50	< 50	< 50	
2-Hexanone	50	< 50	< 50	< 50	
4-methyl-2-pentanone	50	< 50	< 50	< 50	
Acetone	50	< 50	< 50	< 50	
Benzene	1	< 0.7	< 0.7	< 0.7	
Bromodichloromethane	50	< 5	< 5	< 5	
Bromoform	50	< 5	< 5	< 5	
Bromomethane	5	< 5	< 5	< 5	
Carbon Disulfide	50	< 5	< 5	< 5	
Carbon tetrachloride	5	< 5	0.39 J	0.40 J	
Chlorobenzene	5	< 5	< 5	< 5	
Chloroethane	5	< 5	< 5	< 5	
Chloroform	7	< 5	1.5 J	1.5 J	
Chloromethane	5	< 5	< 5	< 5	
cis-1,2-dichloroethene	5	< 5	0.82 J	0.80 J	
cis-1,3-dichloropropene	5	< 5	< 5	< 5	
Dibromochloromethane	5	< 5	< 5	< 5	
Ethylbenzene	5	< 5	< 5	< 5	
Methylene Chloride	5	< 5	< 5	< 5	
Styrene	5	< 5	< 5	< 5	
Tetrachloroethene	5	< 5	24	24	
Toluene	5	< 5	< 5	< 5	
trans-1,2-dichloroethene	5	< 5	< 5	< 5	
trans-1,3-dichloropropene	5	< 5	< 5	< 5	
Trichloroethylene	5	0.49 J	18	19	
Trichlorotrifluoroethane (Freon 113)	5	< 5	0.64 J	0.51 J	
Vinyl Chloride	2	< 2	< 2	< 2	
Xylene-o	5	< 5	< 5	< 5	
Xylenes - m,p	5	< 5	< 5	< 5	
TVOCs		0.49	57	58	

See Notes and Abbreviations on last page

Table 7. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Intermediate Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Notes and Abbreviations:

- (1) Well identification (e.g., GM-211) does not necessarily designate the actual hydrogeologic zone. Determination of the hydrogeologic zones is based on the well screen interval and the regional model layering.
- (2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Samples analyzed for the TCL VOCs using NYSDEC ASP 2005 Method OLM 4.3.

TVOCs are rounded to two significant figures.

Bold value indicates a detection.

- NYSDEC New York State Department of Environmental Conservation
- REP Blind duplicate sample
- VOCs Volatile Organic Compounds
- TVOCs Total Volatile Organic Compounds
- TOGs Technical and Operational Guidance Series
- µg/L micrograms per liter
- J Value is estimated concentration
- TCL Target Compound List
- < 5.0 Compound not detected above its laboratory quantification limit.
- Compound detected in exceedance of NYSDEC SCG Criteria

Table 8. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC	Well ID:	GM-13D	GM-15D	GM-17D	GM-18D	GM-20D
	Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Sample ID:	GM-13D	GM-15D	GM-17D	GM-18D	GM-20D
		Sample Date:	5/5/2014	6/4/2014	5/5/2014	5/1/2014	5/16/2014
1,1,1-Trichloroethane	5		2.3 J	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	5		6.3	0.22 J	< 5	< 5	< 5
1,1-Dichloroethene	5		10	< 5	< 5	< 5	< 5
1,2-Dichloroethane	5		0.27 J	< 5	< 5	< 5	< 5
1,2-Dichloropropane	5		< 5	< 5	< 5	< 5	< 5
2-Butanone	50		< 50	< 50	< 50	< 50	< 50
2-Hexanone	50		< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 50	< 50	< 50
Acetone	50		< 50	< 50	< 50	< 50	< 50
Benzene	1		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50		< 5	< 5	< 5	< 5	< 5
Bromoform	50		< 5	< 5	< 5	< 5	< 5
Bromomethane	5		< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	50		< 5	< 5	< 5	< 5	< 5
Carbon tetrachloride	5		< 5	< 5	< 5	< 5	< 5
Chlorobenzene	5		< 5	< 5	< 5	< 5	< 5
Chloroethane	5		< 5	< 5	< 5	< 5	< 5
Chloroform	7		0.37 J	< 5	< 5	< 5	< 5
Chloromethane	5		< 5	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	5		20	< 5	< 5	< 5	< 5
cis-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	5		< 5	< 5	< 5	< 5	< 5
Ethylbenzene	5		< 5	< 5	< 5	< 5	< 5
Methylene Chloride	5		< 5	< 5	< 5	< 5	< 5
Styrene	5		< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5		180	0.55 J	< 5	0.23 J	< 5
Toluene	5		< 5	< 5	< 5	< 5	< 5
trans-1,2-dichloroethene	5		< 5	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Trichloroethylene	5		72	0.48 J	0.66 J	1.6 J	0.67 J
Trichlorotrifluoroethane (Freon 113)	5		2.7 J	< 5	< 5	< 5	< 5
Vinyl Chloride	2		< 2	< 2	< 2	< 2	< 2
Xylene-o	5		< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	5		< 5	< 5	< 5	< 5	< 5
TVOCs			290	1.3	0.66	1.8	0.67

See Notes and Abbreviations on last page.

Table 8. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	GM-21D	GM-36D	GM-37D	GM-38D	GM-38D	GM-39D _A	GM-70D2
		Sample ID:	GM-21D	GM-36D	GM-37D	GM-38D	REP042914	GM-39D _A	GM-70D2
		Sample Date:	6/3/2014	4/28/2014	5/6/2014	4/29/2014	4/29/2014	5/9/2014	4/30/2014
1,1,1-Trichloroethane	5		< 5	< 5	0.25 J	0.86 J	0.85 J	< 5	< 5
1,1,2,2-Tetrachloroethane	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
1,1,2-Trichloroethane	5		< 5	< 5	< 5	0.78 J	0.58 J	< 5	< 5
1,1-Dichloroethane	5		< 5	< 5	0.60 J	1.4 J	1.4 J	< 5	< 5
1,1-Dichloroethene	5		< 5	< 5	0.28 J	2.4 J	2.7 J	< 5	< 5
1,2-Dichloroethane	5		< 5	< 5	< 5	1.9 J	2.1 J	< 5	< 5
1,2-Dichloropropane	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
2-Butanone	50		< 50	< 50	< 50	< 100	< 130	< 50	< 50
2-Hexanone	50		< 50	< 50	< 50	< 100	< 130	< 50	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 50	< 100	< 130	< 50	< 50
Acetone	50		< 50	< 50	< 50	< 100	< 130	< 50	< 50
Benzene	1		< 0.7	< 0.7	< 0.7	< 1.4	< 1.8	< 0.7	< 0.7
Bromodichloromethane	50		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Bromoform	50		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Bromomethane	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Carbon Disulfide	50		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Carbon tetrachloride	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Chlorobenzene	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Chloroethane	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Chloroform	7		< 5	< 5	< 5	0.60 J	0.58 J	< 5	< 5
Chloromethane	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
cis-1,2-dichloroethene	5		< 5	< 5	< 5	1.6 J	1.6 J	< 5	< 5
cis-1,3-dichloropropene	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Dibromochloromethane	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Ethylbenzene	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Methylene Chloride	5		< 5	< 5	< 5	< 10 B	< 13 B	< 5	< 5
Styrene	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Tetrachloroethene	5		< 5	< 5	0.46 J	9.2 J	8.6 J	< 5	3.0 J
Toluene	5		< 5	< 5	< 5	< 10	< 13	< 5	0.39 J
trans-1,2-dichloroethene	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
trans-1,3-dichloropropene	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Trichloroethylene	5		0.97 J	< 5	0.35 J	430 D	420	1.2 J	10
Trichlorotrifluoroethane (Freon 113)	5		< 5	< 5	< 5	2.1 J	2.0 J	< 5	0.33 J
Vinyl Chloride	2		< 2	< 2	< 2	< 4	< 5	< 2	< 2
Xylene-o	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
Xylenes - m,p	5		< 5	< 5	< 5	< 10	< 13	< 5	< 5
TVOCs			0.97	0	1.9	450	440	1.2	14

See Notes and Abbreviations on last page.

Table 8. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC	Well ID:	GM-74D	GM-79I	GM-79D	N-10624	N-10627
	Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Sample ID: Sample Date:	GM-74D 5/8/2014	GM-79I 5/14/2014	GM-79D 5/14/2014	N-10624 6/2/2014	N-10627 6/2/2014
1,1,1-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	5		< 5	< 5	< 5	< 5	< 5
2-Butanone	50		< 50	< 50	< 50	< 50	< 50
2-Hexanone	50		< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 50	< 50	< 50
Acetone	50		< 50	< 50	< 50	1.8 J	< 50
Benzene	1		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50		< 5	< 5	< 5	< 5	< 5
Bromoform	50		< 5	< 5	< 5	< 5	< 5
Bromomethane	5		< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	50		< 5	< 5	< 5	< 5	< 5
Carbon tetrachloride	5		< 5	< 5	< 5	< 5	< 5
Chlorobenzene	5		< 5	< 5	< 5	< 5	< 5
Chloroethane	5		< 5	< 5	< 5	< 5	< 5
Chloroform	7		< 5	< 5	< 5	< 5	< 5
Chloromethane	5		< 5	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	5		< 5	< 5	0.26 J	< 5	< 5
cis-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	5		< 5	< 5	< 5	< 5	< 5
Ethylbenzene	5		< 5	< 5	< 5	< 5	< 5
Methylene Chloride	5		< 5	< 5	< 5	< 5	< 5
Styrene	5		< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5		< 5	< 5	0.34 J	< 5	< 5
Toluene	5		< 5	< 5	< 5	< 5	< 5
trans-1,2-dichloroethene	5		< 5	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Trichloroethylene	5		1.0 J	0.31 J	18	< 5	0.68 J
Trichlorotrifluoroethane (Freon 113)	5		< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	2		< 2	< 2	< 2	< 2	< 2
Xylene-o	5		< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	5		< 5	< 5	< 5	< 5	< 5
TVOCs			1.0	0.31	19	1.8	0.68

See Notes and Abbreviations on last page.

Table 8. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Notes and Abbreviations:

- (1) Well identification (e.g., GM-70D2) does not necessarily designate the actual hydrogeologic zone. Determination of the hydrogeologic zones is based on the well screen interval and the regional model layering.
- (2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent values are listed.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Samples analyzed for the TCL VOCs using NYSDEC ASP 2005 Method OLM4.3.

TVOCs are rounded to two significant figures.

Bold value indicates a detection.

- NYSDEC New York State Department of Environmental Conservation
- VOCs Volatile Organic Compounds
- TVOCs Total Volatile Organic Compounds
- µg/L micrograms per liter
- D Concentration is based on a diluted sample analysis
- J Value is estimated concentration.
- TCL Target Compound List
- TOGs Technical and Operational Guidance Series
- < 5.0 Compound not detected above its laboratory quantification limit
- Compound detected in exceedance of NYSDEC SCG Criteria

Table 9. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep 2 Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	GM-15D2	GM-33D2	GM-34D	GM-34D2
		Sample ID:	GM-15D2	GM-33D2	GM-34D	GM-34D2
		Sample Date:	6/4/2014	6/5/2014	4/24/2014	4/24/2014
1,1,1-Trichloroethane	5		< 5	< 5	< 10	< 5
1,1,1,2-Tetrachloroethane	5		< 5	< 5	< 10	< 5
1,1,2-Trichloroethane	5		< 5	< 5	< 10	< 5
1,1-Dichloroethane	5		0.23 J	< 5	0.74 J	0.30 J
1,1-Dichloroethene	5		0.68 J	< 5	3.7 J	1.1 J
1,2-Dichloroethane	5		< 5	< 5	< 10	< 5
1,2-Dichloropropane	5		< 5	< 5	< 10	< 5
2-Butanone	50		< 50	< 50	< 100	< 50
2-Hexanone	50		< 50	< 50	< 100	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 100	< 50
Acetone	50		< 50	< 50	< 100 B	< 50
Benzene	1		< 0.7	< 0.7	< 1.4	< 0.7
Bromodichloromethane	50		< 5	< 5	< 10	< 5
Bromoform	50		< 5	< 5	< 10	< 5
Bromomethane	5		< 5	< 5	< 10	< 5
Carbon Disulfide	50		< 5	< 5	< 10	< 5
Carbon tetrachloride	5		< 5	< 5	< 10	< 5
Chlorobenzene	5		< 5	< 5	< 10	< 5
Chloroethane	5		< 5	< 5	< 10	< 5
Chloroform	7		0.24 J	< 5	< 10	< 5
Chloromethane	5		< 5	< 5	< 10	< 5
cis-1,2-dichloroethene	5		0.30 J	0.25 J	8.5 J	2.7 J
cis-1,3-dichloropropene	5		< 5	< 5	< 10	< 5
Dibromochloromethane	5		< 5	< 5	< 10	< 5
Ethylbenzene	5		< 5	< 5	< 10	< 5
Methylene Chloride	5		< 5	< 5	0.64 J	< 5
Styrene	5		< 5	< 5	< 10	< 5
Tetrachloroethene	5		6.2	4.7 J	6.0 J	10
Toluene	5		< 5	< 5	< 10	< 5
trans-1,2-dichloroethene	5		< 5	< 5	< 10	0.39 J
trans-1,3-dichloropropene	5		< 5	< 5	< 10	< 5
Trichloroethylene	5		9.2	23	340	180
Trichlorotrifluoroethane (Freon 113)	5		0.84 J	5.2	7.4 J	1.4 J
Vinyl Chloride	2		< 2	< 2	< 4	< 2
Xylene-o	5		< 5	< 5	< 10	< 5
Xylenes - m,p	5		< 5	< 5	< 10	< 5
TVOCs			18	33	370	200

See Notes and Abbreviations on last page.

Table 9. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep 2 Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	GM-35D2	GM-36D2	GM-37D2	GM-38D2	GM-39D _B	GM-71D2
		Sample ID:	GM-35D2	GM-36D2	GM-37D2	GM-38D2	GM-39D _B	GM-71D2
		Sample Date:	4/30/2014	4/28/2014	5/6/2014	4/29/2014	5/9/2014	5/1/2014
1,1,1-Trichloroethane	5	< 5	0.35 J	0.40 J	0.80 J	< 5	2.0 J	
1,1,2,2-Tetrachloroethane	5	< 5	< 5	< 5	< 5	< 5	< 5	
1,1,2-Trichloroethane	5	< 5	< 5	< 5	< 5	< 5	< 5	
1,1-Dichloroethane	5	< 5	0.53 J	0.94 J	5.5	< 5	6	
1,1-Dichloroethene	5	0.25 J	0.53 J	0.41 J	1.6 J	< 5	3.0 J	
1,2-Dichloroethane	5	< 5	< 5	< 5	0.47 J	< 5	< 5	
1,2-Dichloropropane	5	< 5	< 5	< 5	< 5	< 5	< 5	
2-Butanone	50	< 50	< 50	< 50	< 50	< 50	< 50	
2-Hexanone	50	< 50	< 50	< 50	< 50	< 50	< 50	
4-methyl-2-pentanone	50	< 50	< 50	< 50	< 50	< 50	< 50	
Acetone	50	< 50	< 50	< 50	< 50	< 50	< 50	
Benzene	1	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	
Bromodichloromethane	50	< 5	< 5	< 5	< 5	< 5	< 5	
Bromoform	50	< 5	< 5	< 5	< 5	< 5	< 5	
Bromomethane	5	< 5	< 5	< 5	< 5	< 5	< 5	
Carbon Disulfide	50	< 5	< 5	< 5	< 5	< 5	< 5	
Carbon tetrachloride	5	0.22 J	< 5	< 5	< 5	< 5	0.25 J	
Chlorobenzene	5	< 5	< 5	< 5	< 5	< 5	< 5	
Chloroethane	5	< 5	< 5	< 5	< 5	< 5	< 5	
Chloroform	7	< 5	0.26 J	0.23 J	1.5 J	< 5	0.63 J	
Chloromethane	5	< 5	< 5	< 5	< 5	< 5	< 5	
cis-1,2-dichloroethene	5	0.69 J	0.24 J	< 5	1.3 J	0.30 J	0.79 J	
cis-1,3-dichloropropene	5	< 5	< 5	< 5	< 5	< 5	< 5	
Dibromochloromethane	5	< 5	< 5	< 5	< 5	< 5	< 5	
Ethylbenzene	5	< 5	< 5	< 5	< 5	< 5	< 5	
Methylene Chloride	5	< 5	< 5	< 5	< 5	< 5	< 5	
Styrene	5	< 5	< 5	< 5	< 5	< 5	< 5	
Tetrachloroethene	5	6.4	< 5	0.43 J	< 5	0.47 J	< 5	
Toluene	5	< 5	< 5	< 5	< 5	< 5	< 5	
trans-1,2-dichloroethene	5	< 5	< 5	< 5	< 5	< 5	< 5	
trans-1,3-dichloropropene	5	< 5	< 5	< 5	< 5	< 5	< 5	
Trichloroethylene	5	94	2.0 J	0.70 J	33	52	9.6	
Trichlorotrifluoroethane (Freon 113)	5	1.5 J	< 5	< 5	< 5	< 5	< 5	
Vinyl Chloride	2	< 2	< 2	< 2	< 2	< 2	< 2	
Xylene-o	5	< 5	< 5	< 5	< 5	< 5	< 5	
Xylenes - m,p	5	< 5	< 5	< 5	< 5	< 5	< 5	
TVOCs		100	3.9	3.1	44	53	22	

See Notes and Abbreviations on last page.

Table 9. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep 2 Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	GM-73D	GM-73D2	GM-74D2	GM-75D2	GM-75D2
		Sample ID:	GM-73D	GM-73D2	GM-74D2	GM-75D2 (REP)	GM-75D2
		Sample Date:	5/9/2014	5/8/2014	5/8/2014	6/2/2014	6/2/2014
1,1,1-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	5		< 5	0.36 J	0.39 J	< 5	< 5
1,1-Dichloroethene	5		< 5	0.48 J	0.70 J	0.33 J	0.32 J
1,2-Dichloroethane	5		< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	5		< 5	< 5	< 5	< 5	< 5
2-Butanone	50		< 50	< 50	< 50	< 50	< 50
2-Hexanone	50		< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 50	< 50	< 50
Acetone	50		< 50	< 50	< 50	< 50	< 50
Benzene	1		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	50		< 5	< 5	< 5	< 5	< 5
Bromoform	50		< 5	< 5	< 5	< 5	< 5
Bromomethane	5		< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	50		< 5	< 5	< 5	< 5	< 5
Carbon tetrachloride	5		< 5	< 5	< 5	< 5	< 5
Chlorobenzene	5		< 5	< 5	< 5	< 5	< 5
Chloroethane	5		< 5	< 5	< 5	< 5	< 5
Chloroform	7		< 5	< 5	0.26 J	< 5	< 5
Chloromethane	5		< 5	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	5		< 5	0.34 J	0.23 J	< 5	< 5
cis-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	5		< 5	< 5	< 5	< 5	< 5
Ethylbenzene	5		< 5	< 5	< 5	< 5	< 5
Methylene Chloride	5		< 5	< 5	< 5	< 5	< 5
Styrene	5		< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5		< 5	1.1 J	3.3 J	1.5 J	1.5 J
Toluene	5		< 5	< 5	< 5	< 5	< 5
trans-1,2-dichloroethene	5		< 5	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	5		< 5	< 5	< 5	< 5	< 5
Trichloroethylene	5		11	25	6.3	38	36
Trichlorotrifluoroethane (Freon 113)	5		< 5	< 5	0.64 J	0.61 J	0.54 J
Vinyl Chloride	2		< 2	< 2	< 2	< 2	< 2
Xylene-o	5		< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	5		< 5	< 5	< 5	< 5	< 5
TVOCs			11	27	12	40	38

See Notes and Abbreviations on last page.

Table 9. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep 2 Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	TT-101D	TT 101D1	Well 1	Well 3
		Sample ID:	TT-101D	TT 101D1	Well 1	Well 3
		Sample Date:	5/27/2014	5/27/2014	6/10/2014	6/10/2014
1,1,1-Trichloroethane	5		0.50 J	0.55 J	< 13	0.67 J
1,1,1,2-Tetrachloroethane	5		< 5 J	< 5 J	< 13	< 5.0
1,1,2-Trichloroethane	5		0.29 J	0.49 J	< 13	< 5.0
1,1-Dichloroethane	5		0.84 J	0.66 J	0.80 J	1.0 J
1,1-Dichloroethene	5		4.0 J	3.0 J	1.3 J	3.2 J
1,2-Dichloroethane	5		0.33 J	0.29 J	< 13	< 5.0
1,2-Dichloropropane	5		< 5 J	< 5 J	5.7 J	< 5.0
2-Butanone	50		< 50 J	< 50 J	< 130	< 50
2-Hexanone	50		< 50 J	< 50 J	< 130	< 50
4-methyl-2-pentanone	50		< 50 J	< 50 J	< 130	< 50
Acetone	50		< 50 J	< 50 J	< 130	< 50
Benzene	1		< 0.7 J	< 0.7 J	< 1.8	< 0.70
Bromodichloromethane	50		< 5 J	< 5 J	< 13	< 5.0
Bromoform	50		< 5 J	< 5 J	< 13	< 5.0
Bromomethane	5		< 5 J	< 5 J	< 13	< 5.0
Carbon Disulfide	50		< 5 J	< 5 J	< 13	< 5.0
Carbon tetrachloride	5		0.24 J	1.2 J	< 13	< 5.0
Chlorobenzene	5		< 5 J	< 5 J	< 13	0.29 J
Chloroethane	5		< 5 J	< 5 J	< 13	1.2 J
Chloroform	7		0.55 J	0.90 J	< 13	< 5.0
Chloromethane	5		< 5 J	< 5 J	< 13	< 5.0
cis-1,2-dichloroethene	5		3.3 J	2.0 J	4.7 J	7.6
cis-1,3-dichloropropene	5		< 5 J	< 5 J	< 13	< 5.0
Dibromochloromethane	5		< 5 J	< 5 J	< 13	< 5.0
Ethylbenzene	5		< 5 J	< 5 J	< 13	< 5.0
Methylene Chloride	5		< 5 J	< 5 J	< 13	< 5.0
Styrene	5		< 5 J	< 5 J	< 13	< 5.0
Tetrachloroethene	5		< 5 J	< 5 J	40	40
Toluene	5		< 5 J	0.31 J	< 13	< 5.0
trans-1,2-dichloroethene	5		< 5 J	< 5 J	< 13	< 5.0
trans-1,3-dichloropropene	5		< 5 J	< 5 J	< 13	< 5.0
Trichloroethylene	5		57 J	93 J	490	140
Trichlorotrifluoroethane (Freon 113)	5		13 J	8.3 J	3.5 J	3.5 J
Vinyl Chloride	2		< 2 J	< 2 J	< 5.0	36
Xylene-o	5		< 5 J	< 5 J	< 13	< 5.0
Xylenes - m,p	5		< 5 J	< 5 J	< 13	< 5.0
TVOCs			80	110	550	230

See Notes and Abbreviations on last page.

Table 9. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep 2 Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID:	Well 17	Well 17	Well 18	Well 19
		Sample ID: Sample Date:	Well 17 6/10/2014	Well 17 (REP) 6/10/2014	Well 18 6/10/2014	Well 19 6/10/2014
1,1,1-Trichloroethane	5		0.56 J	0.48 J	0.58 J	0.43 J
1,1,2,2-Tetrachloroethane	5		< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane	5		< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethane	5		1.1 J	1.1 J	1.0 J	0.74 J
1,1-Dichloroethene	5		1.8 J	1.8 J	< 5.0	0.97 J
1,2-Dichloroethane	5		< 5.0	< 5.0	< 5.0	0.45 J
1,2-Dichloropropane	5		< 5.0	< 5.0	< 5.0	< 5.0
2-Butanone	50		< 50	< 50	< 50	< 50
2-Hexanone	50		< 50	< 50	< 50	< 50
4-methyl-2-pentanone	50		< 50	< 50	< 50	< 50
Acetone	50		< 50	< 50	< 50	< 50
Benzene	1		< 0.70	< 0.70	< 0.70	< 0.70
Bromodichloromethane	50		< 5.0	< 5.0	< 5.0	< 5.0
Bromoform	50		< 5.0	< 5.0	< 5.0	< 5.0
Bromomethane	5		< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	50		< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride	5		< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	5		< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane	5		< 5.0	< 5.0	< 5.0	< 5.0
Chloroform	7		0.42 J	0.40 J	0.24 J	0.48 J
Chloromethane	5		< 5.0	< 5.0	< 5.0	< 5.0
cis-1,2-dichloroethene	5		4.2 J	4.1 J	1.7 J	20
cis-1,3-dichloropropene	5		< 5.0	< 5.0	< 5.0	< 5.0
Dibromochloromethane	5		< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	5		< 5.0	< 5.0	< 5.0	< 5.0
Methylene Chloride	5		< 5.0	< 5.0	< 5.0	< 5.0
Styrene	5		< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene	5		33	32	13	6.9
Toluene	5		< 5.0	< 5.0	< 5.0	< 5.0
trans-1,2-dichloroethene	5		< 5.0	< 5.0	0.23 J	0.52 J
trans-1,3-dichloropropene	5		< 5.0	< 5.0	< 5.0	< 5.0
Trichloroethylene	5		190	160 D	51	170
Trichlorotrifluoroethane (Freon 113)	5		4.7 J	5	1.5 J	0.92 J
Vinyl Chloride	2		< 2.0	< 2.0	< 2.0	< 2.0
Xylene-o	5		< 5.0	< 5.0	< 5.0	< 5.0
Xylenes - m,p	5		< 5.0	< 5.0	< 5.0	< 5.0
TVOCs			240	200	69	200

See Notes and Abbreviations on last page.

Table 9. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep 2 Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Notes and Abbreviations:

- (1) Well identification (e.g., GM-73D) does not necessarily designate the actual hydrogeologic zone. Determination of the hydrogeologic zones is based on the well screen interval and the regional model layering.
- (2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent values are listed.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Samples analyzed for the TCL VOCs using NYSDEC ASP 2005 Method OLM4.3.

Only detected constituents are summarized.

TVOCs are rounded to two significant figures.

Bold value indicates a detection.

- NYSDEC New York State Department of Environmental Conservation
- VOCs Volatile Organic Compounds
- TVOCs Total Volatile Organic Compounds
- µg/L micrograms per liter
- J Value is estimated concentration.
- D Secondary dilution
- B Compound detected in associated blank sample
- OU2 Operable Unit 2
- REP Blind duplicate Sample
- TCL Target Compound List
- TOGs Technical and Operational Guidance Series
- < 5.0 Compound not detected above its laboratory quantification limit.
- Compound detected in exceedance of NYSDEC SCG Criteria

Table 10. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep 3 Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards, Criteria, and Guidance Values (µg/L) ⁽²⁾	Well ID: Sample ID: Sample Date:	TT-101D2 TT-101D2 5/27/2014
1,1,1-Trichloroethane	5		0.35 J
1,1,2,2-Tetrachloroethane	5		< 5 J
1,1,2-Trichloroethane	5		0.59 J
1,1-Dichloroethane	5		0.64 J
1,1-Dichloroethene	5		2.2 J
1,2-Dichloroethane	5		< 5 J
1,2-Dichloropropane	5		< 5 J
2-Butanone	50		< 50 J
2-Hexanone	50		< 50 J
4-methyl-2-pentanone	50		< 50 J
Acetone	50		2.0 J
Benzene	1		< 0.7 J
Bromodichloromethane	50		< 5 J
Bromoform	50		< 5 J
Bromomethane	5		< 5 J
Carbon Disulfide	50		< 5 J
Carbon tetrachloride	5		0.86 J
Chlorobenzene	5		< 5 J
Chloroethane	5		< 5 J
Chloroform	7		0.76 J
Chloromethane	5		< 5 J
cis-1,2-dichloroethene	5		1.9 J
cis-1,3-dichloropropene	5		< 5 J
Dibromochloromethane	5		< 5 J
Ethylbenzene	5		< 5 J
Methylene Chloride	5		< 5 J
Styrene	5		< 5 J
Tetrachloroethene	5		0.29 J
Toluene	5		0.36 J
trans-1,2-dichloroethene	5		< 5 J
trans-1,3-dichloropropene	5		< 5 J
Trichloroethylene	5		300 DJ
Trichlorotrifluoroethane (Freon 113)	5		11 J
Vinyl Chloride	2		< 2 J
Xylene-o	5		< 5 J
Xylenes - m,p	5		< 5 J
TVOCs			320

See Notes and Abbreviations on last page.

Table 10. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Wells in the Deep 3 Zone⁽¹⁾, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Notes and Abbreviations:

- (1) Well identification (e.g., TT-101D2) does not necessarily designate the actual hydrogeologic zone. Determination of the hydrogeologic zones is based on the well screen interval and the regional model layering.
- (2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent values are listed.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Samples analyzed for the TCL VOCs using NYSDEC ASP 2005 Method OLM4.3.

TVOCs are rounded to two significant figures.

Bold value indicates a detection.

- NYSDEC New York State Department of Environmental Conservation
- VOCs Volatile Organic Compounds
- TVOCs Total Volatile Organic Compounds
- µg/L micrograms per liter
- J Value is estimated concentration.
- D Concentration is based on a diluted sample analysis
- OU2 Operable Unit 2
- TCL Target Compound List
- TOGs Technical and Operational Guidance Series
- < 5.0 Compound not detected above its laboratory quantification limit.
- Compound detected in exceedance of NYSDEC SCG Criteria

Table 11. Concentrations of Site-Related Volatile Organic Compounds in Outpost Wells, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

NYSDEC		Well:	BPOW 1-1	BPOW 1-2	BPOW 1-3	BPOW 1-4 ⁽²⁾	BPOW 1-5 ⁽²⁾	BPOW 1-6 ⁽²⁾	BPOW 2-1	BPOW 2-2
Constituent in µg/L	Standards Criteria and guidance Values (µg/L) ⁽¹⁾	Sample ID: Date:	BPOW 1-1 4/17/2014	BPOW 1-2 4/17/2014	BPOW 1-3 4/17/2014	BPOW 1-4 4/16/2014	BPOW 1-5 4/16/2014	BPOW 1-6 4/18/2014	BPOW 2-1 4/22/2014	BPOW 2-2 4/23/2014
1,1,1-Trichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorotrifluoroethane (Freon 113)	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	5		0.86	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Site-Related VOCs⁽³⁾			0.86⁽⁴⁾	0⁽⁴⁾	0	0	0	0	0	0
TVOC Trigger Value⁽⁵⁾			0.6	0.6	0.6	NE	NE	NE	NE	NE

See Notes and Abbreviations on last page

Table 11. Concentrations of Site-Related Volatile Organic Compounds in Outpost Wells, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

NYSDEC		Well:	BPOW 2-3	BPOW 3-1	BPOW 3-2	BPOW 3-3 ⁽²⁾	BPOW 3-4 ⁽²⁾	BPOW 3-4 ⁽²⁾
Constituent in µg/L	Standards Criteria and guidance Values (µg/L) ⁽¹⁾	Sample ID: Date:	BPOW 2-3 4/23/2014	BPOW 3-1 4/15/2014	BPOW 3-2 4/15/2014	BPOW 3-3 4/18/2014	BPOW 3-4 4/22/2014	REP042214 4/22/2014
1,1,1-Trichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	5		<0.5	<0.5	<0.5	<0.5	0.64	0.65
1,1-Dichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	5		<0.5	<0.5	<0.5	<0.5	0.57	0.53
Chlorobenzene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7		<0.5	<0.5	<0.5	<0.5	1.1	0.92
cis-1,2-dichloroethene	5		<0.5	<0.5	<0.5	<0.5	0.68	0.70
Trichlorotrifluoroethane (Freon 113)	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	5		<0.5	<0.5	<0.5	<0.5	50 D	52 D
Total Site-Related VOCs ⁽³⁾			0	0	0	0	53	55
TVOC Trigger Value ⁽⁵⁾			NE	1.5	1.5	NE	NE	NE

Notes and Abbreviations:

Samples analyzed for site-related VOCs per the PWSCP (ARCADIS G&M, Inc. 2003) using USEPA Method 524.2

- ⁽¹⁾ Standards Criteria and Guidance (SCGs) values based on the Groundwater Feasibility Study Report (ARCADIS Geraherty & Miller, Inc. 2000) are based on the NYSDEC TOGs (NYSDEC 1998); most stringent values listed.
- ⁽²⁾ Wells BPOW1-4, BPOW1-5, BPOW1-6, BPOW3-3, and BPOW3-4 are currently monitored by Northrop Grumman on a voluntary basis. The screen intervals for these wells were selected by the Navy based on data obtained from vertical profile borings VP-127 (BPOW-1 cluster) and VP-128 (BPOW-3 cluster).
- ⁽³⁾ Site-related VOCs were established for the wells identified above in the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003).
- ⁽⁴⁾ The TVOC Trigger Value for Cluster 1 was initially exceeded on April 23, 2004; confirmatory sampling and reporting was conducted as per the PWSCP (ARCADIS G&M, Inc. 2003).
- ⁽⁵⁾ TVOC Trigger Values were established for Wells BPOW1-1, BPOW1-2, BPOW1-3, BPOW3-1, BPOW3-2, BPOW4-1, and BPOW4-2 in the PWSCP (ARCADIS G&M, Inc. 2003). Established trigger values have been previously exceeded (except for BPOW 3-1 and BPOW 3-2) and no longer apply as the goal of PWSCP has been met. Wells BPOW 4-1 and BPOW 4-2 were not sampled this round due to ongoing NAVY well reconstruction activities.

Total Site-Related VOCs are rounded to two significant figures.

Bold value indicates constituent detected.

- Compound detected in exceedance of NYSDEC SCG Criteria
- D Concentration is based on a diluted sample analysis
- NE Not Established
- REP Blind duplicate sample
- TVOCs Total Volatile Organic Compounds
- TOGs Technical and Operational Guidance Series
- USEPA United States Environmental Protection Agency
- VOC Volatile Organic Compounds
- µg/L micrograms per liter
- <0.5 Compound not detected above its laboratory quantification limit.



Table 12. Concentrations of Metals in Monitoring Wells, Second Quarter 2014
Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent in µg/L	NYSDEC Standards Criteria and Guidance Values (µg/L) ⁽¹⁾	Well:	GM-15S	GM-78I	GM-78S	MW-01GF	MW-02GF	N-10631	PT1 MW-4	PT1 MW-5	PT1 MW-6
		Sample ID:	GM-15S	GM-78I	GM-78S	MW-01GF	MW-02GF	N-10631	PT1 MW-4	PT1 MW-5	PT1 MW-6
		Date:	5/7/2014	5/15/2014	5/15/2014	5/7/2014	5/7/2014	5/15/2014	5/16/2014	5/7/2014	5/7/2014
Cadmium	5	--	< 5	< 5	< 5	< 5	6.4	--	--	--	--
Cadmium (Dissolved)	5	--	< 5	< 5	< 5	< 5	< 5	--	--	--	--
Chromium	50	659	< 10	< 10	< 10	45	22	< 10	579	177	
Chromium (Dissolved)	50	632	< 10	< 10	< 10	44	< 10	< 10	564	172	

Notes and Abbreviations:

⁽¹⁾ Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

Bold value indicates constituent detected

- 6.4** Compound detected in exceedance of NYSDEC SCG Criteria
- µg/L Micrograms per liter
- NYSDEC New York State Department of Environmental Conservation
- TOGs Technical and Operational Guidance Series
- Not analyzed
- <5.0 Compound not detected above its laboratory quantification limit.

Table 13. Concentrations of Volatile Organic Compounds in Blank Samples, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Location ID:	Field Blank ⁽¹⁾	Field Blank ⁽²⁾					
	Sample ID:	FB042314	FB042414	FB050714	FB051214	FB051514	FB051914	FB053014
	Sample Date:	4/23/2014	4/24/2014	5/7/2014	5/12/2014	5/15/2014	5/19/2014	5/30/2014
1,1,1-Trichloroethane		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2,2-Tetrachloroethane		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethane		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethene		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloroethane		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloropropane		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Butanone		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Methyl-2-Pentanone		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Acetone		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene		--	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromoform		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromomethane		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroform		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloromethane		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,2-Dichloroethene		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorodibromomethane		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene		--	< 5.0	< 5.0	0.28 J	0.30 J	0.26 J	< 5.0
Dichloromethane		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene (Monomer)		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,2-Dichloroethene		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,3-Dichloropropene		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichloroethene		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorotrifluoroethane (Freon 113)		< 0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl chloride		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-Xylene		--	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
m,p-Xylene		--	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total VOCs			0	0	0.28	0.30	0.26	0

See Notes and Abbreviations on last page

Table 13. Concentrations of Volatile Organic Compounds in Blank Samples, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Location ID:	Field Blank ⁽²⁾	Trip Blank ⁽¹⁾					
	Sample ID:	FB060214	TB041514	TB041614	TB041714	TB041814	TB042214	TB042314
	Sample Date:	6/2/2014	4/15/2014	4/16/2014	4/17/2014	4/18/2014	4/22/2014	4/23/2014
1,1,1-Trichloroethane	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	< 5.0	--	--	--	--	--	--	--
2-Butanone	< 5.0	--	--	--	--	--	--	--
2-Hexanone	< 50	--	--	--	--	--	--	--
4-Methyl-2-Pentanone	< 50	--	--	--	--	--	--	--
Acetone	< 50	--	--	--	--	--	--	--
Benzene	< 0.7	--	--	--	--	--	--	--
Bromodichloromethane	< 5.0	--	--	--	--	--	--	--
Bromoform	< 5.0	--	--	--	--	--	--	--
Bromomethane	< 5.0	--	--	--	--	--	--	--
Carbon Disulfide	< 5.0	--	--	--	--	--	--	--
Carbon Tetrachloride	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	< 5.0	--	--	--	--	--	--	--
Chloroform	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	< 5.0	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 5.0	--	--	--	--	--	--	--
Chlorodibromomethane	< 5.0	--	--	--	--	--	--	--
Ethylbenzene	< 5.0	--	--	--	--	--	--	--
Dichloromethane	< 5.0	--	--	--	--	--	--	--
Styrene (Monomer)	< 5.0	--	--	--	--	--	--	--
Tetrachloroethene	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	< 5.0	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 5.0	--	--	--	--	--	--	--
Trichloroethene	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorotrifluoroethane (Freon 113)	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	< 5.0	--	--	--	--	--	--	--
o-Xylene	< 5.0	--	--	--	--	--	--	--
m,p-Xylene	< 2.0	--	--	--	--	--	--	--
Total VOCs		0	0	0	0	0	0	0

See Notes and Abbreviations on last page

Table 13. Concentrations of Volatile Organic Compounds in Blank Samples, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Sample ID: Sample Date:	Trip Blank ⁽²⁾						
		TB042414 4/24/2014	TB042914 4/29/2014	TB043014 4/30/2014	TB050114 5/1/2014	TB050514 5/5/2014	TB050614 5/6/2014	TB050714 5/7/2014
1,1,1-Trichloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2,2-Tetrachloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloropropane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Butanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Methyl-2-Pentanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Acetone		2.2 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromoform		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromomethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroform		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloromethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,2-Dichloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorodibromomethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene		< 5.0	0.26 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dichloromethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene (Monomer)		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,2-Dichloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,3-Dichloropropene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorotrifluoroethane (Freon 113)		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl chloride		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-Xylene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
m,p-Xylene		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total VOCs		2.2	0.26	0	0	0	0	0

See Notes and Abbreviations on last page

Table 13. Concentrations of Volatile Organic Compounds in Blank Samples, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Location ID:	Trip Blank ⁽²⁾						
	Sample ID:	TB050814	TB050914	TB051214	TB051414	TB051514	TB051614	TB051914
	Sample Date:	5/8/2014	5/9/2014	5/12/2014	5/14/2014	5/15/2014	5/16/2014	5/19/2014
1,1,1-Trichloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2,2-Tetrachloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloropropane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Butanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Methyl-2-Pentanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Acetone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromoform		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromomethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene		0.26 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroform		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloromethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,2-Dichloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorodibromomethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dichloromethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene (Monomer)		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,2-Dichloroethene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,3-Dichloropropene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichloroethene		0.21 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorotrifluoroethane (Freon 113)		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl chloride		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-Xylene		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
m,p-Xylene		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total VOCs		0.47	0	0	0	0	0	0

See Notes and Abbreviations on last page

Table 13. Concentrations of Volatile Organic Compounds in Blank Samples, Second Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Location ID:	Trip Blank ⁽²⁾					
	Sample ID:	TB052714	TB053014	TB060214	TB060314	TB060414	TB060514
	Sample Date:	5/27/2014	5/30/2014	6/2/2014	6/3/2014	6/4/2014	6/5/2014
1,1,1-Trichloroethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,1,2-Tetrachloroethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloroethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloropropane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Butanone	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Methyl-2-Pentanone	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Acetone	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	< 0.7 J	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromoform	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Bromomethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.23 J
Chloroethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloroform	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloromethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,2-Dichloroethene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorodibromomethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dichloromethane	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene (Monomer)	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,2-Dichloroethene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
trans-1,3-Dichloropropene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichloroethene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorotrifluoroethane (Freon 113)	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl chloride	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
o-Xylene	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
m,p-Xylene	< 2.0 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total VOCs		0	0	0	0	0	0.23

Notes and Abbreviations

Above analyte list represents aggregation of all VOCs analyzed for using the two laboratory methods specified below.

⁽¹⁾ Sample analysis by USEPA Method 524.2

⁽²⁾ Sample analysis by NYSDEC ASP 2005 OLM 4.3

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Total VOCs rounded to two significant figures.

Bold indicates constituent detected

NYSDEC New York State Department of Environmental Conservation

µg/L Micrograms per liter

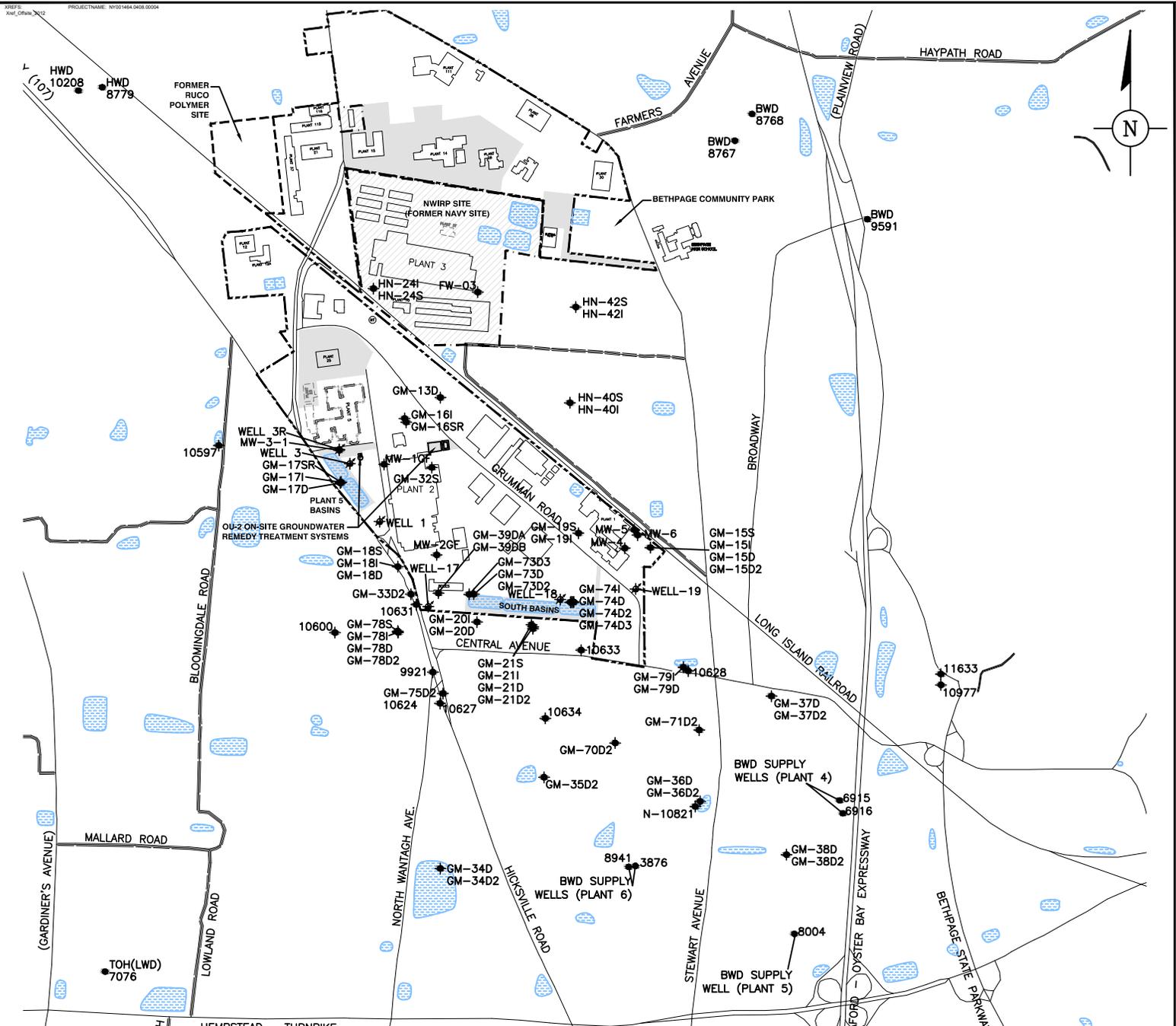
USEPA United States Environmental Protection Agency

VOCs Volatile organic compounds

J Value is estimated concentration

-- Not analyzed

Figures



EXPLANATION	
---	PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE SITE
---	PROPERTY BOUNDARY OF THE FORMER U.S. NAVY SITE
---	LIMITS OF THE FORMER OXY/RUCO SITE
+++++	LONG ISLAND RAILROAD
[Hatched Box]	DENOTES NORTHROP GRUMMAN OWNED PROPERTY (AS OF 2009)
[Diagonal Lines Box]	DENOTES FORMER U.S. NAVY OWNED PROPERTY
[Blue Hatched Box]	RECHARGE BASIN
10592	OBSERVATION/MONITORING/OUTPOST WELL ⁽¹⁾
9591	PUBLIC SUPPLY WELL ⁽²⁾
WELL-17	NORTHROP GRUMMAN REMEDIAL WELL
NWIRP	NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
TOH (LWD)	TOWN OF HEMPSTEAD LEVITOWN WATER DISTRICT
HWD	HICKSVILLE WATER DISTRICT
SFWD	SOUTH FARMINGDALE WATER DISTRICT
BWD	BETHPAGE WATER DISTRICT
NYAW	NEW YORK AMERICAN WATER

NOTE:
(1) THIS FIGURE DEPICTS OBSERVATION/MONITORING/OUTPOST WELLS INCLUDED IN THE OU-2 GROUNDWATER MONITORING PROGRAM AND SELECTED WELLS.
(2) PUBLIC SUPPLY WELLS ARE NOT SAMPLED AS A PART OF THE OU-2 GROUNDWATER MONITORING PROGRAM AND ARE ONLY USED FOR REFERENCE.

11633
10977
GM-15S
GM-15I
GM-15D
GM-15D2
GM-79I
GM-79D
GM-37D
GM-37D2
GM-71D2
GM-70D2
GM-35D2
GM-36D
GM-36D2
N-10821
8915
8916
GM-38D
GM-38D2
8004
BWD SUPPLY WELLS (PLANT 5)
BWD SUPPLY WELLS (PLANT 4)
8941
3876
GM-34D
GM-34D2
GM-21S
GM-21I
GM-21D
GM-21D2
10634
10633
GM-74D
GM-74D2
GM-74D3
GM-74D3
GM-73D
GM-73D2
GM-73D3
GM-39DA
GM-39DB
GM-19I
GM-19S
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WELL-3-998
WELL-3-999
WELL-3-1000



NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK
OPERABLE UNIT 2

**LOCATION OF ON-SITE
GROUNDWATER REMEDIATION WELLS**

ARCADIS

FIGURE
1

CITY: (Read) DIV: (Group) (Reqd) DB: (Read) LD: (Opt) PIC: (Opt) PM: (Reqd) TM: (Opt) Lyr: (Opt) ON: (Off) REF:
 I:\ENV\CAD\White Plains\NY\ACT\NY001498\0314\gwm14101498f02.dwg LAYOUT: 2 SAVED: 3/27/2015 12:22 PM ACADVER: 18.1S (LMS TECH) PAGES: 18 PLT: PLTHALF.CTB PLOTTED: 3/27/2015 1:52 PM BY: AMICELI, KIMBERLY
 XREFS: IMAGES: S:\Site\1015021915270_1_Page_1.tiff



EXPLANATION:

- PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE SITE
- PROPERTY BOUNDARY OF THE FORMER U.S. NAVY SITE
- LONG ISLAND RAILROAD
- DENOTES NORTHROP GRUMMAN OWNED PROPERTY (AS OF 2009)
- DENOTES FORMER U.S. NAVY OWNED PROPERTY
- RECHARGE BASIN
- OBSERVATION/MONITORING WELL
- INDUSTRIAL WELL
- PUBLIC SUPPLY WELL
- IRRIGATION WELL
- NORTHROP GRUMMAN OR NAVY PRODUCTION WELL
- ABANDONED WELL
- COMPLETED OU-2 VERTICAL PROFILE BORING
- COMPLETED OU-3 VERTICAL PROFILE BORING
- LINE OF EQUAL WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (DASHED WHERE LESS CERTAIN)
- (70.07) WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
- DIRECTION OF HORIZONTAL COMPONENT OF GROUNDWATER FLOW
- OU-2 OPERABLE UNIT 2
- OU-3 OPERABLE UNIT 3

NOTES:

1. NORTHROP GRUMMAN REMEDIAL WELLS 1, 3R, 17, 18 AND 19 SCREENED IN DEEP 2 ZONE.
2. BETHPAGE WATER DISTRICT WELL 3876 SCREENED IN DEEP ZONE.
3. BETHPAGE WATER DISTRICT WELLS 6915 AND 6916 SCREENED IN DEEP 2 ZONE.
4. BETHPAGE WATER DISTRICT WELL 8941 SCREENED IN THE DEEP 3 ZONE.

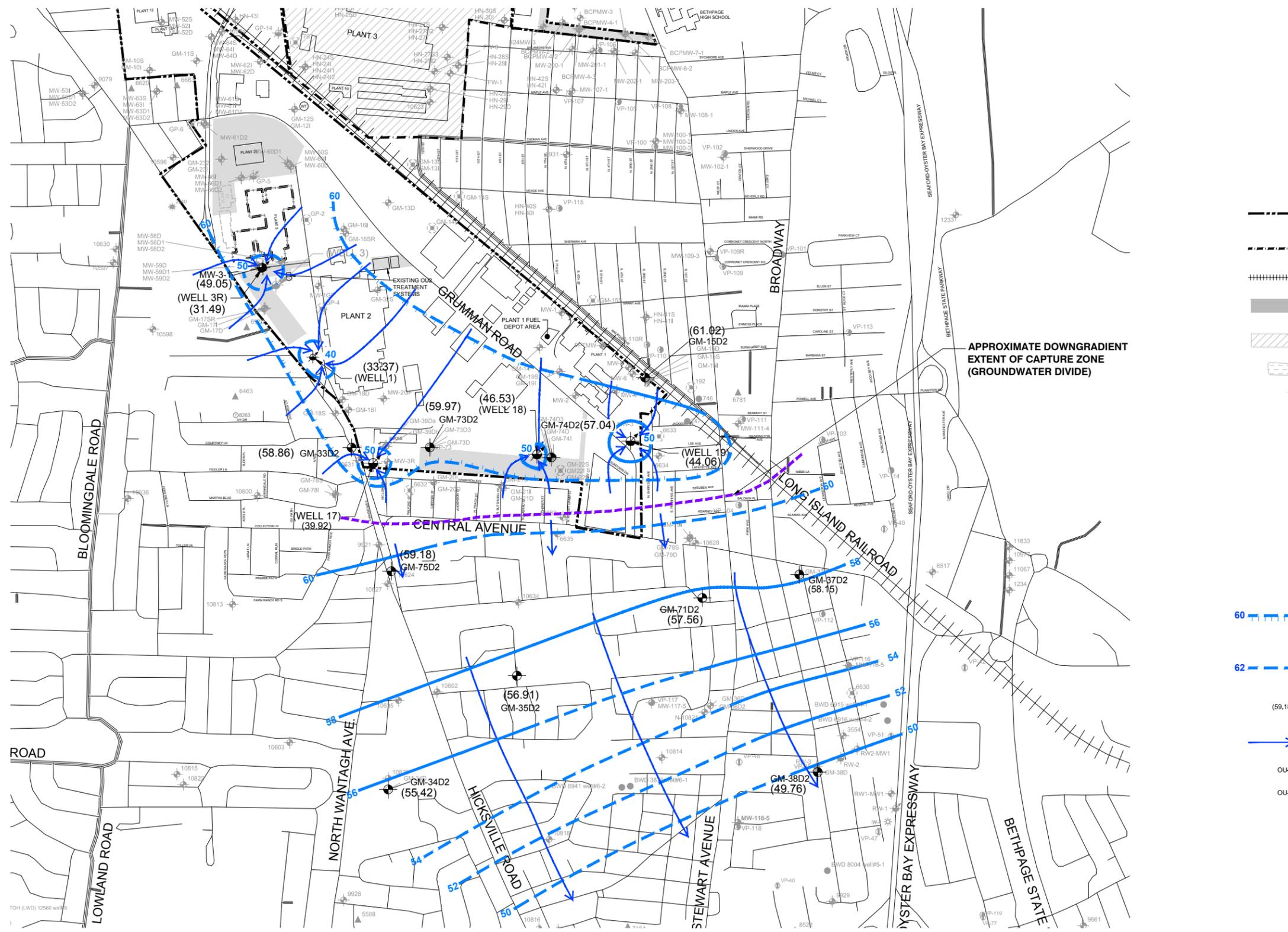
NORTHROP GRUMMAN SYSTEMS CORPORATION
 BETHPAGE, NEW YORK
OPERABLE UNIT 2

**WATER-TABLE CONFIGURATION AND HORIZONTAL
 GROUNDWATER FLOW DIRECTION IN THE
 SHALLOW/INTERMEDIATE ZONE,
 JUNE 2014**



ALL COORDINATES REFERENCED TO NORTH AMERICAN DATUM 1983

CITY: (Read) DIV: (Read) LD: (Opt) PIC: (Opt) PM: (Read) TM: (Opt) LTR: (Opt) ON: (Off) REF: --- PLOTSTYLETABLE: PL: FULL.CTB PLOTTED: 3/27/2015 2:44 PM BY: IAMICELI, KIMBERLY
 I:\ENV\CAD\White Plains\NY\ACT\NY001496\0314\gm1411496\01 - Standard\1496\01.dwg LAYOUT: 3 SAVED: 3/27/2015 1:48 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---
 XREFS: IMAGES: S:\NY01P\1015021915270_Page_2.tiff



- EXPLANATION:**
- PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE SITE
 - - - - PROPERTY BOUNDARY OF THE FORMER U.S. NAVY SITE
 - ||||| LONG ISLAND RAILROAD
 - DENOTES NORTHROP GRUMMAN OWNED PROPERTY (AS OF 2009)
 - ▨ DENOTES FORMER U.S. NAVY OWNED PROPERTY
 - RECHARGE BASIN
 - ⊕ OBSERVATION/MONITORING WELL
 - ▲ INDUSTRIAL WELL
 - PUBLIC SUPPLY WELL
 - ⊛ IRRIGATION WELL
 - ⊛ NORTHROP GRUMMAN OR NAVY PRODUCTION WELL
 - ⊙ ABANDONED WELL
 - ⊕ COMPLETED OU-2 VERTICAL PROFILE BORING
 - ⊙ COMPLETED OU-3 VERTICAL PROFILE BORING
 - 60 HACHURES DENOTE LOWER WATER-LEVEL ELEVATION WITHIN POTENTIOMETRIC CONTOUR
 - 62 --- LINE OF EQUAL WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (DASHED WHERE LESS CERTAIN)
 - (59.18) WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
 - DIRECTION OF HORIZONTAL COMPONENT OF GROUNDWATER FLOW
 - OU-2 OPERABLE UNIT 2
 - OU-3 OPERABLE UNIT 3

- NOTES:**
1. NORTHROP GRUMMAN REMEDIAL WELLS 1, 3R, 17, 18 AND 19 SCREENED IN DEEP 2 ZONE.
 2. BETHPAGE WATER DISTRICT WELL 3876 SCREENED IN DEEP ZONE.
 3. BETHPAGE WATER DISTRICT WELLS 6915 AND 6916 SCREENED IN DEEP 2 ZONE.
 4. BETHPAGE WATER DISTRICT WELL 8941 SCREENED IN THE DEEP 3 ZONE.



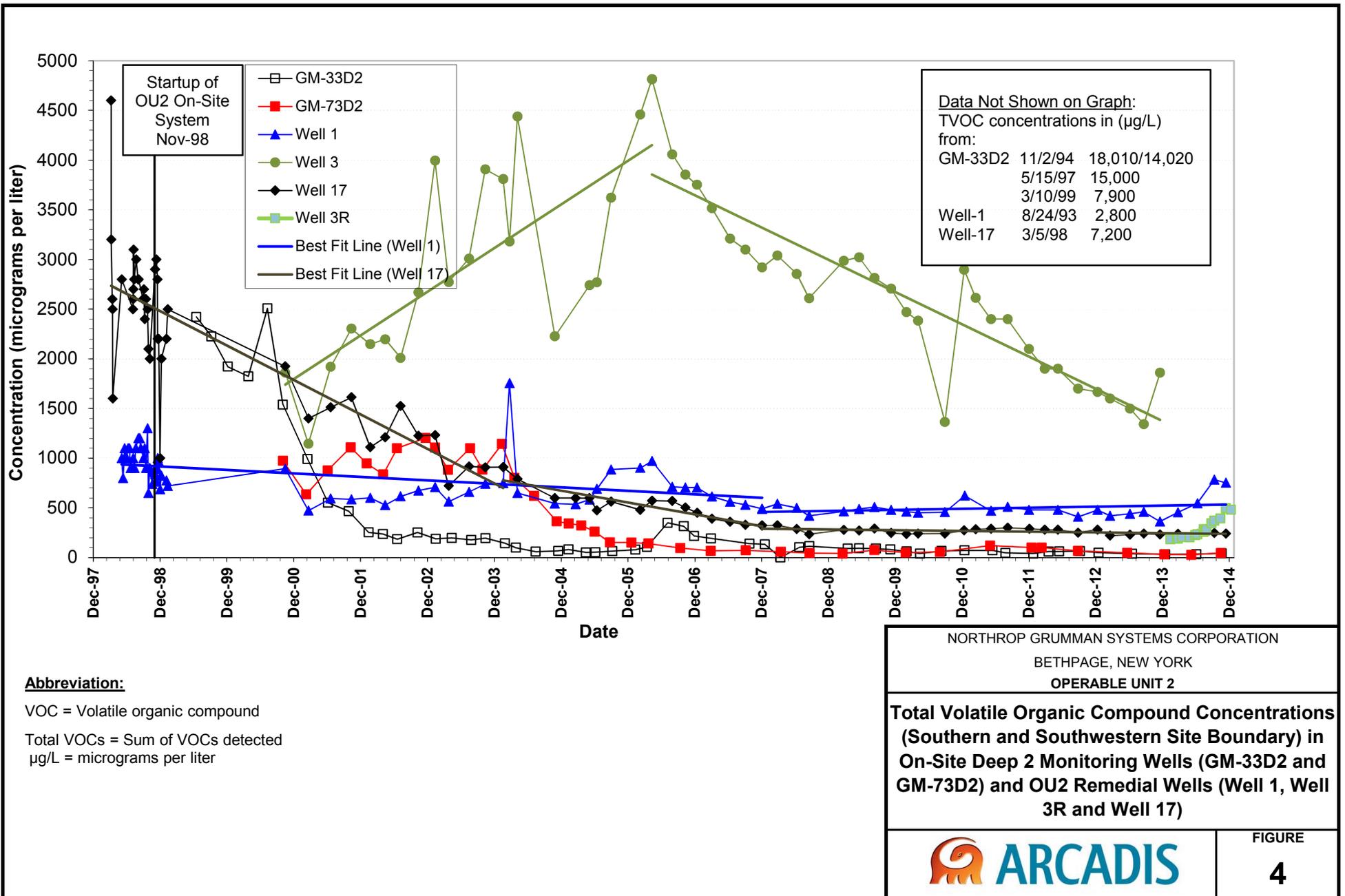
NORTHROP GRUMMAN SYSTEMS CORPORATION
 BETHPAGE, NEW YORK
OPERABLE UNIT 2

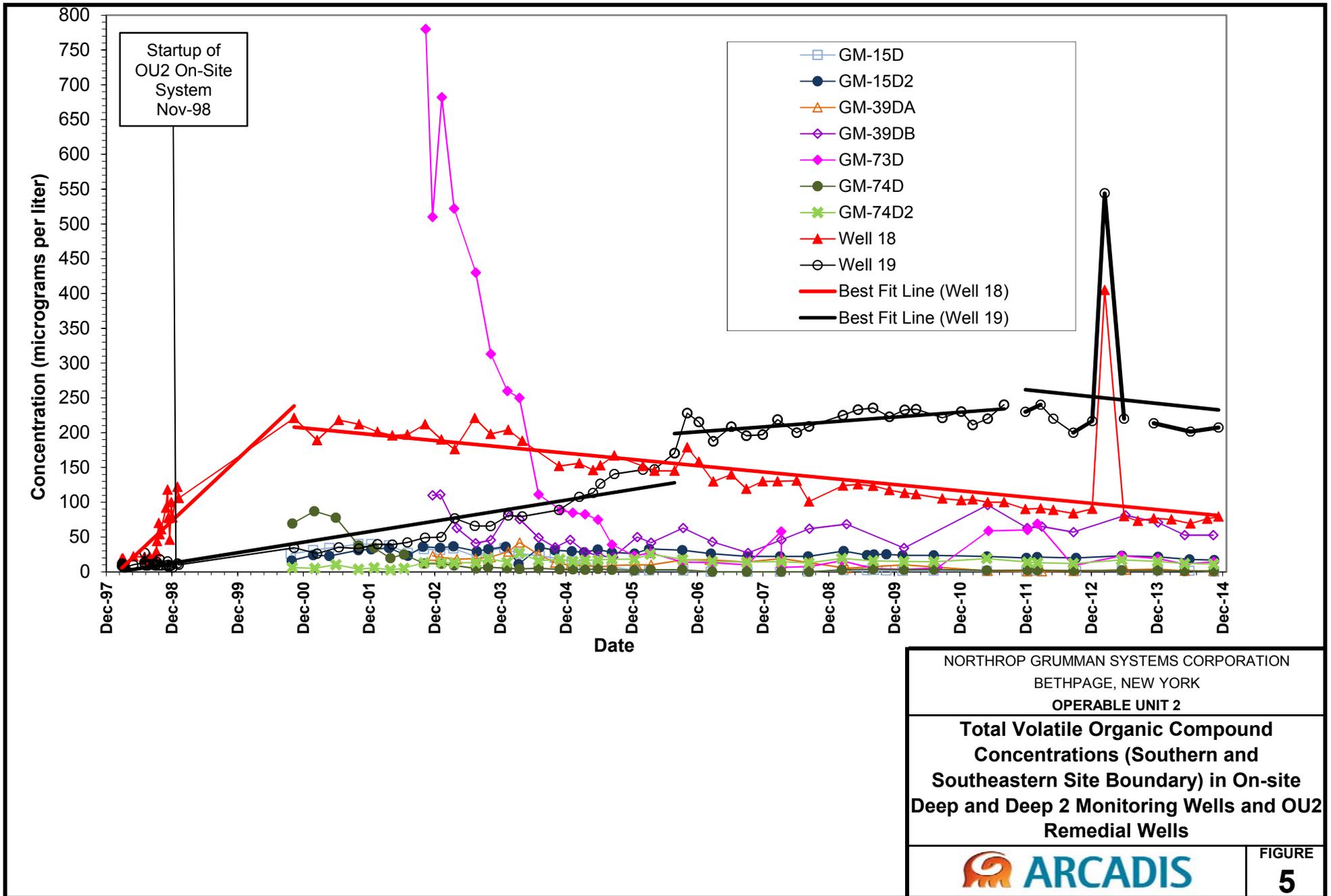
**POTENTIOMETRIC SURFACE ELEVATION AND
 HORIZONTAL GROUNDWATER FLOW DIRECTION IN
 THE DEEP 2 ZONE
 JUNE 2014**

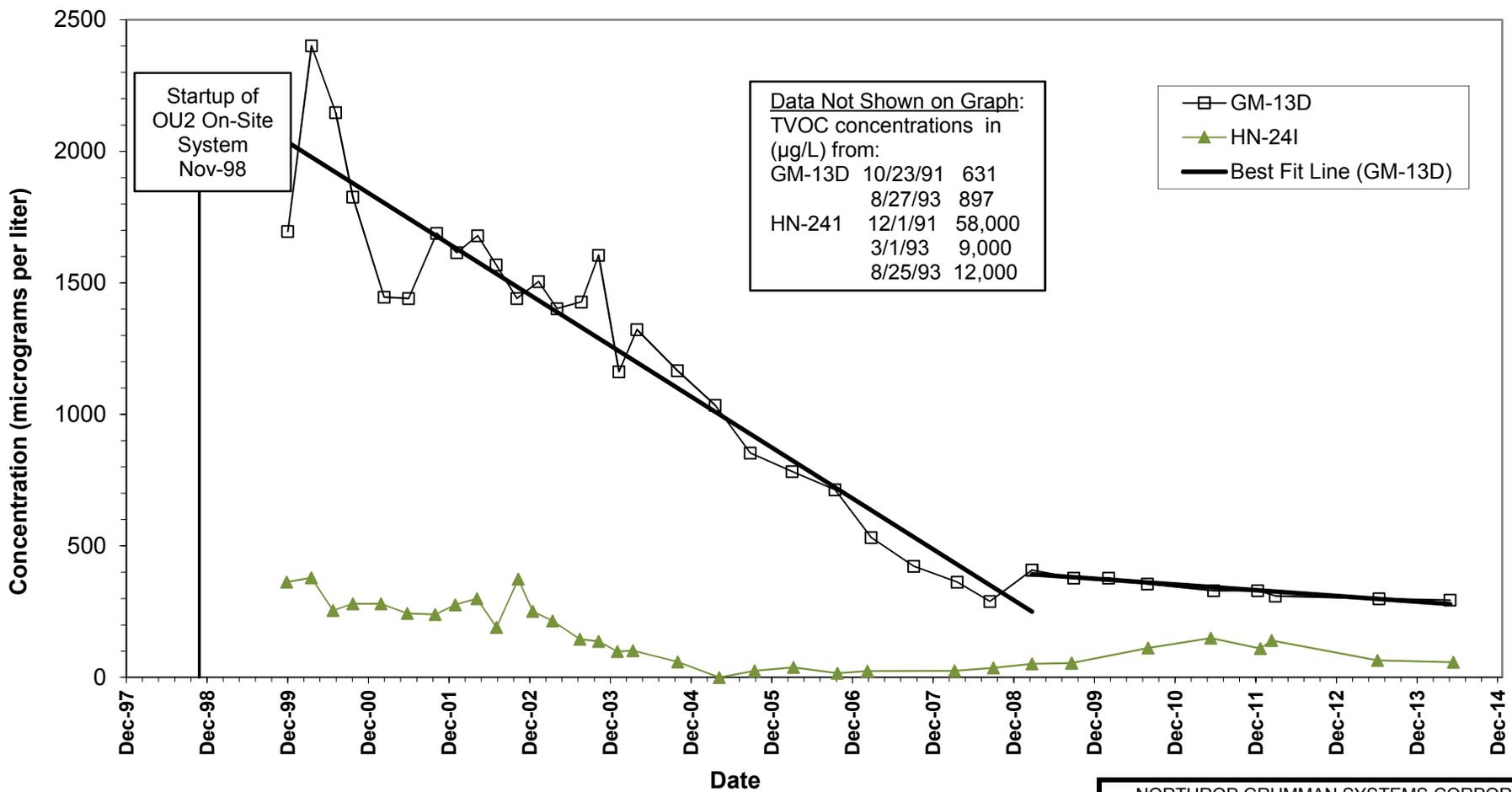
ARCADIS

FIGURE
3

ALL COORDINATES REFERENCED TO NORTH AMERICAN DATUM 1983







Abbreviation:

VOC = Volatile organic compound

TVOCs = Sum of VOCs detected

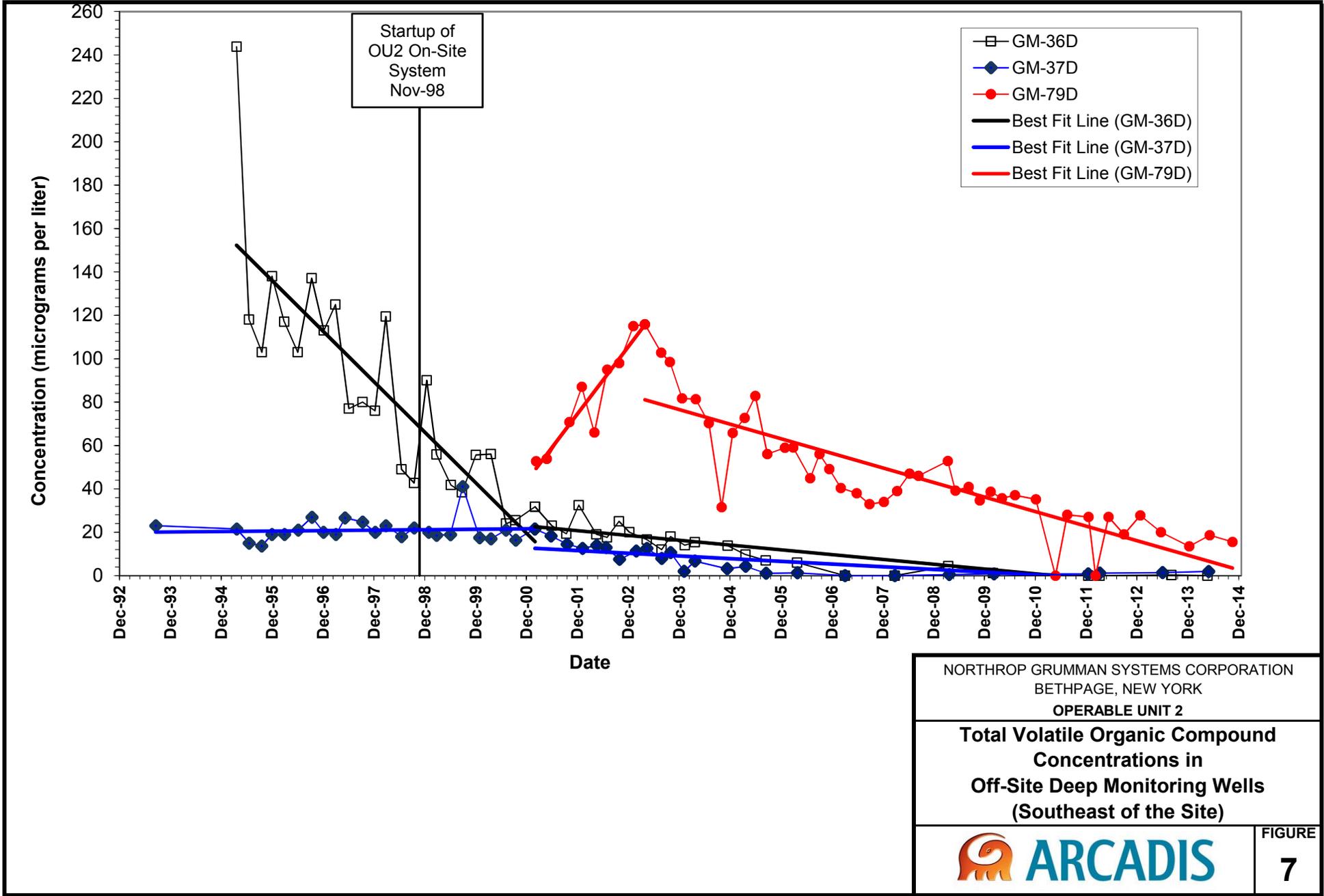
µg/L = micrograms per liter

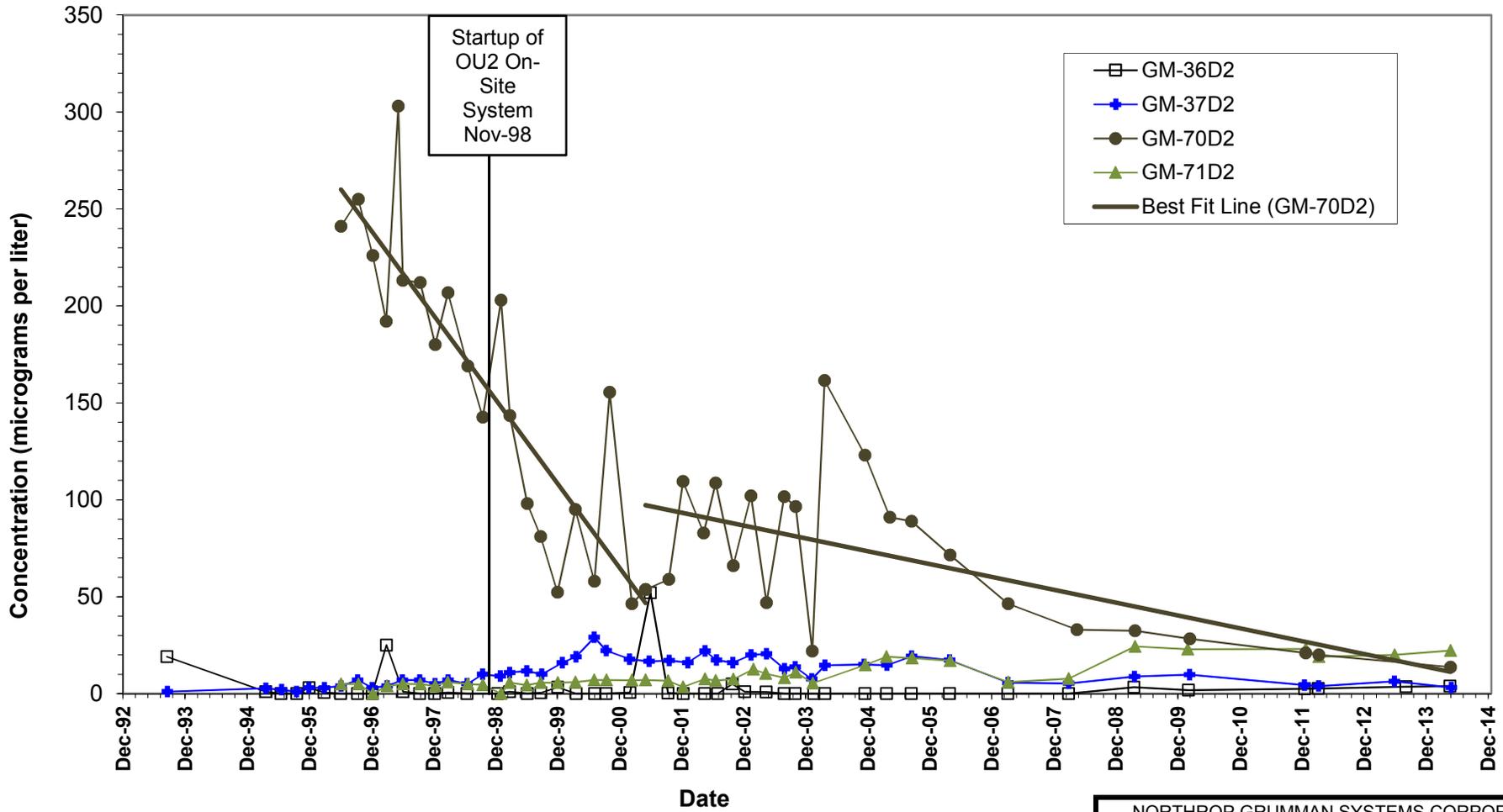
NORTHROP GRUMMAN SYSTEMS CORPORATION
 BETHPAGE, NEW YORK
 OPERABLE UNIT 2

**Total Volatile Organic Compound
 Concentrations in On-Site Intermediate
 and Deep Monitoring Wells**

 **ARCADIS**

FIGURE
6



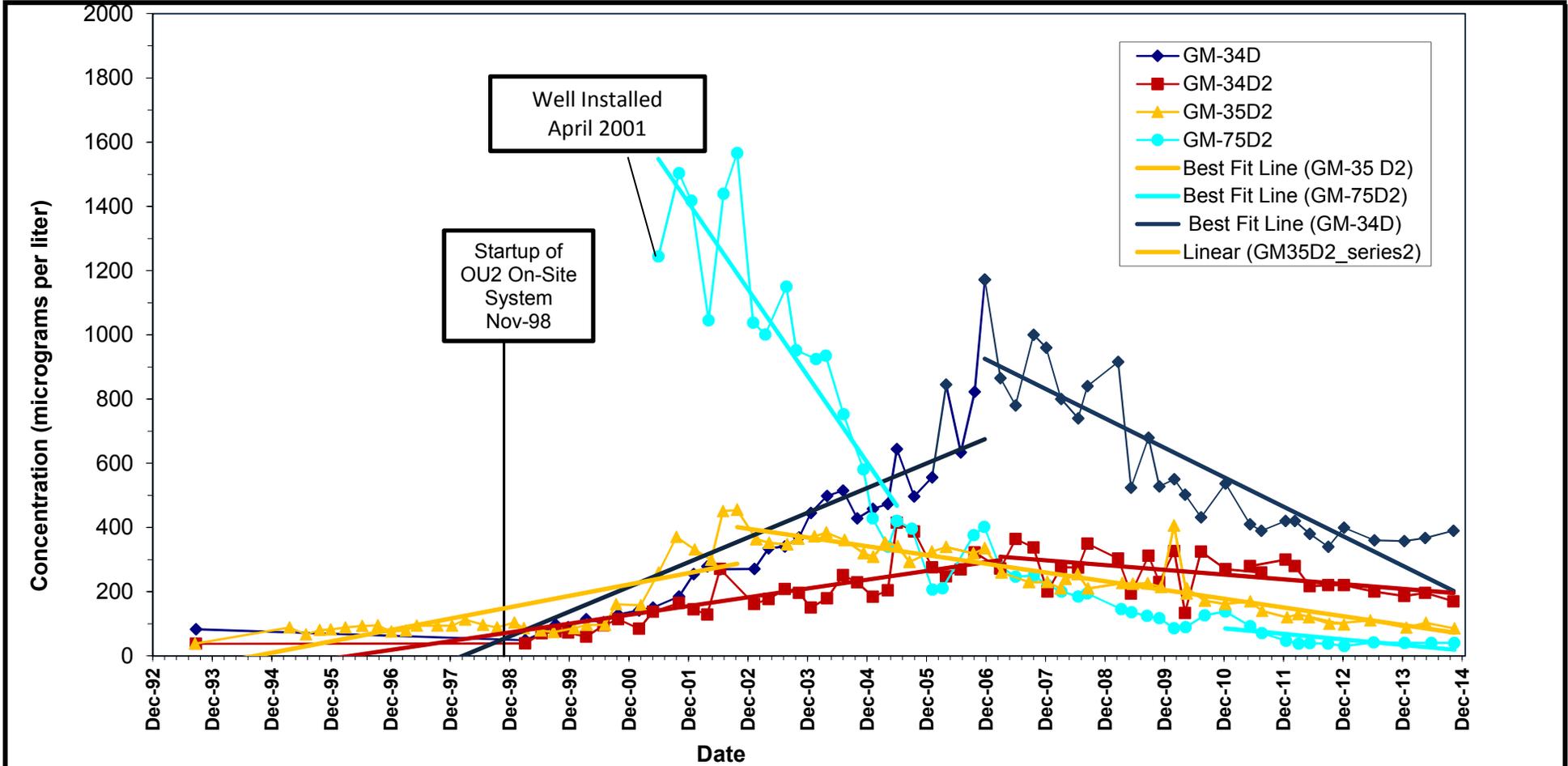


NORTHROP GRUMMAN SYSTEMS CORPORATION
 BETHPAGE, NEW YORK
 OPERABLE UNIT 2

**Total Volatile Organic Compound
 Concentrations in
 Off-Site Deep2 Monitoring Wells
 (Southeast of the Site)**

 **ARCADIS**

**FIGURE
8**

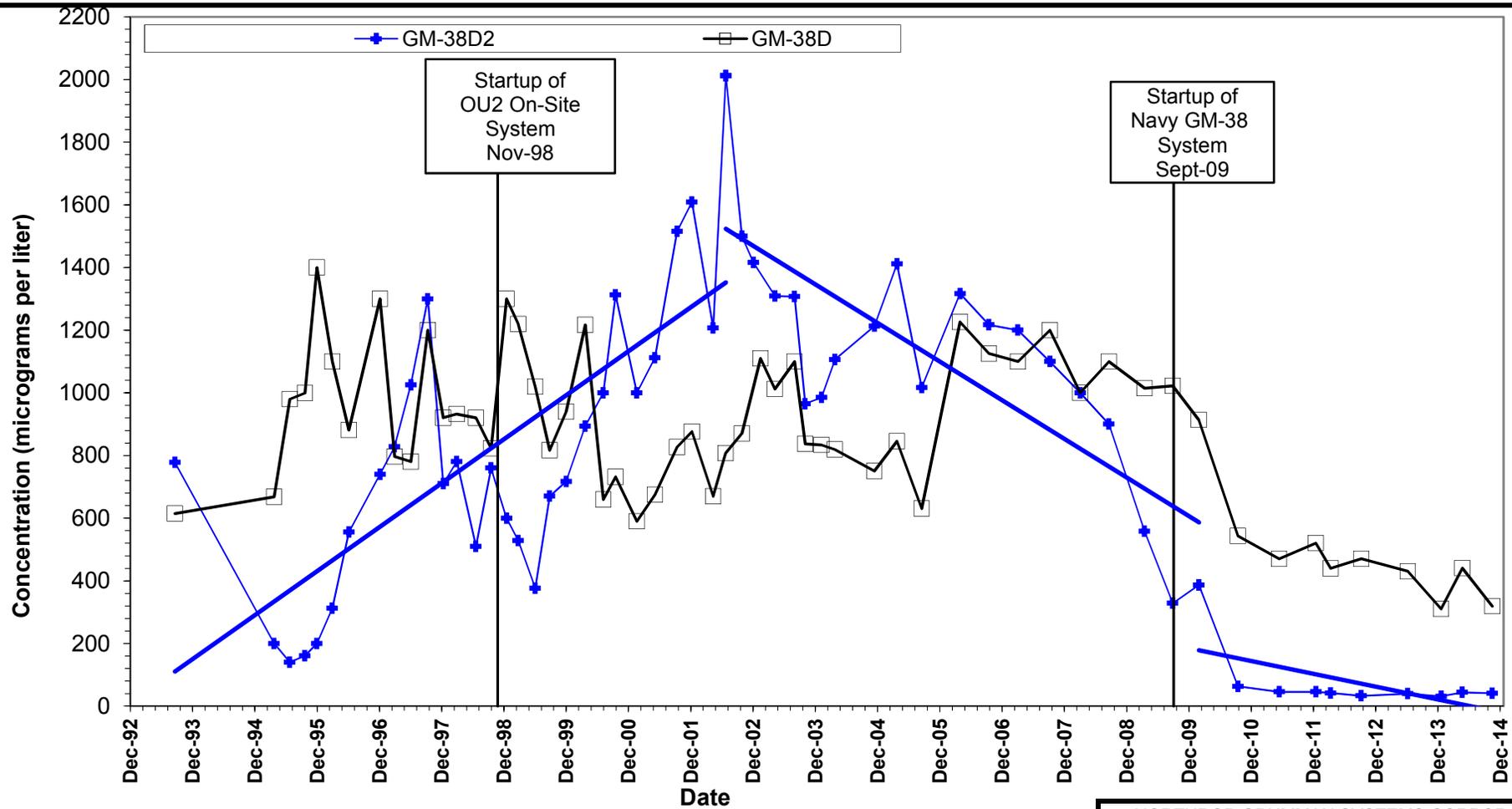


NORTHROP GRUMMAN SYSTEMS CORPORATION
 BETHPAGE, NEW YORK
 OPERABLE UNIT 2

**Total Volatile Organic Compound
 Concentrations in
 Off-Site Deep-Deep2 Monitoring Wells
 (South of the Site)**

 **ARCADIS**

FIGURE
9

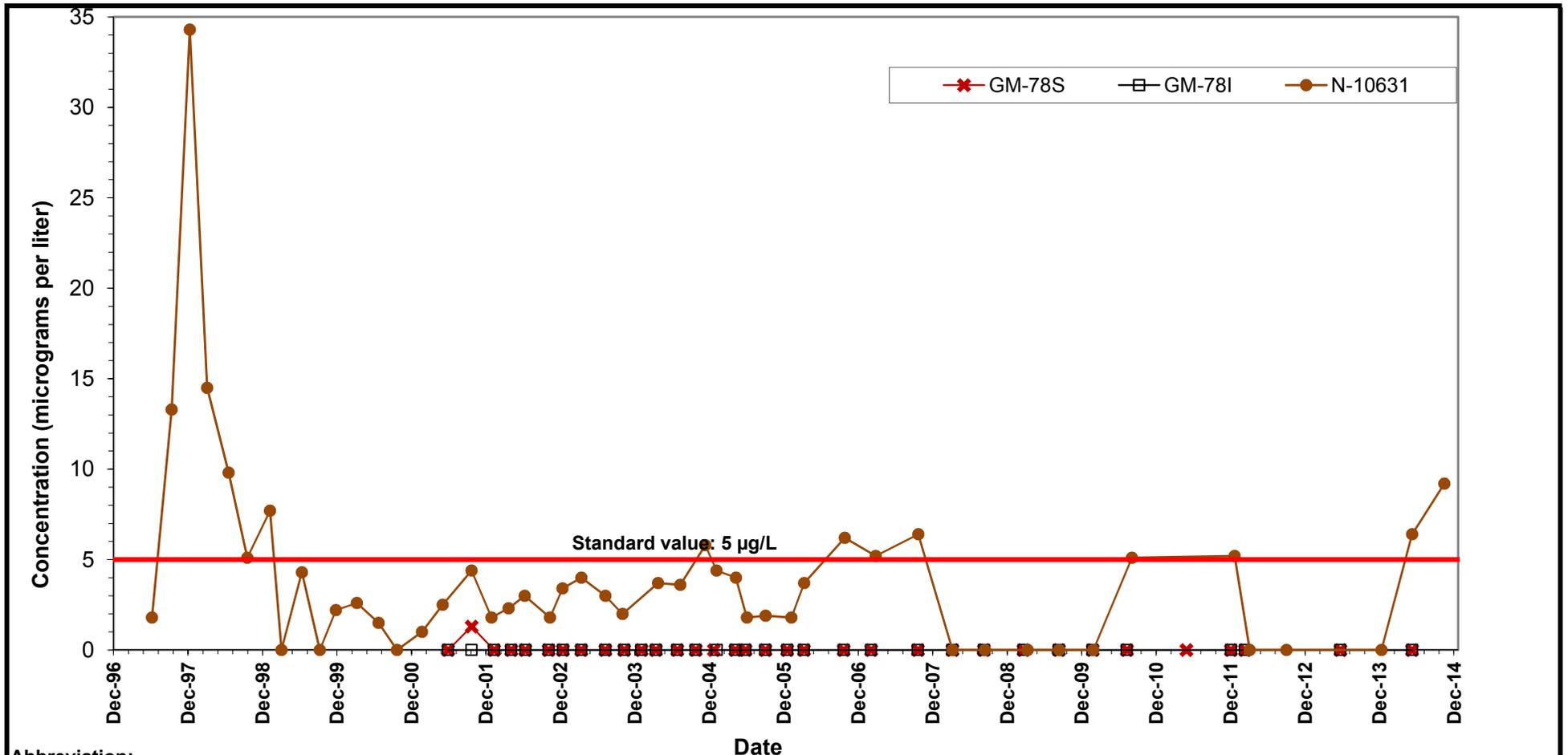


NORTHROP GRUMMAN SYSTEMS CORPORATION
 BETHPAGE, NEW YORK
 OPERABLE UNIT 2

**Total Volatile Organic Compound
 Concentrations in
 GM-38 Area Deep and Deep2
 Monitoring Wells**

 **ARCADIS**

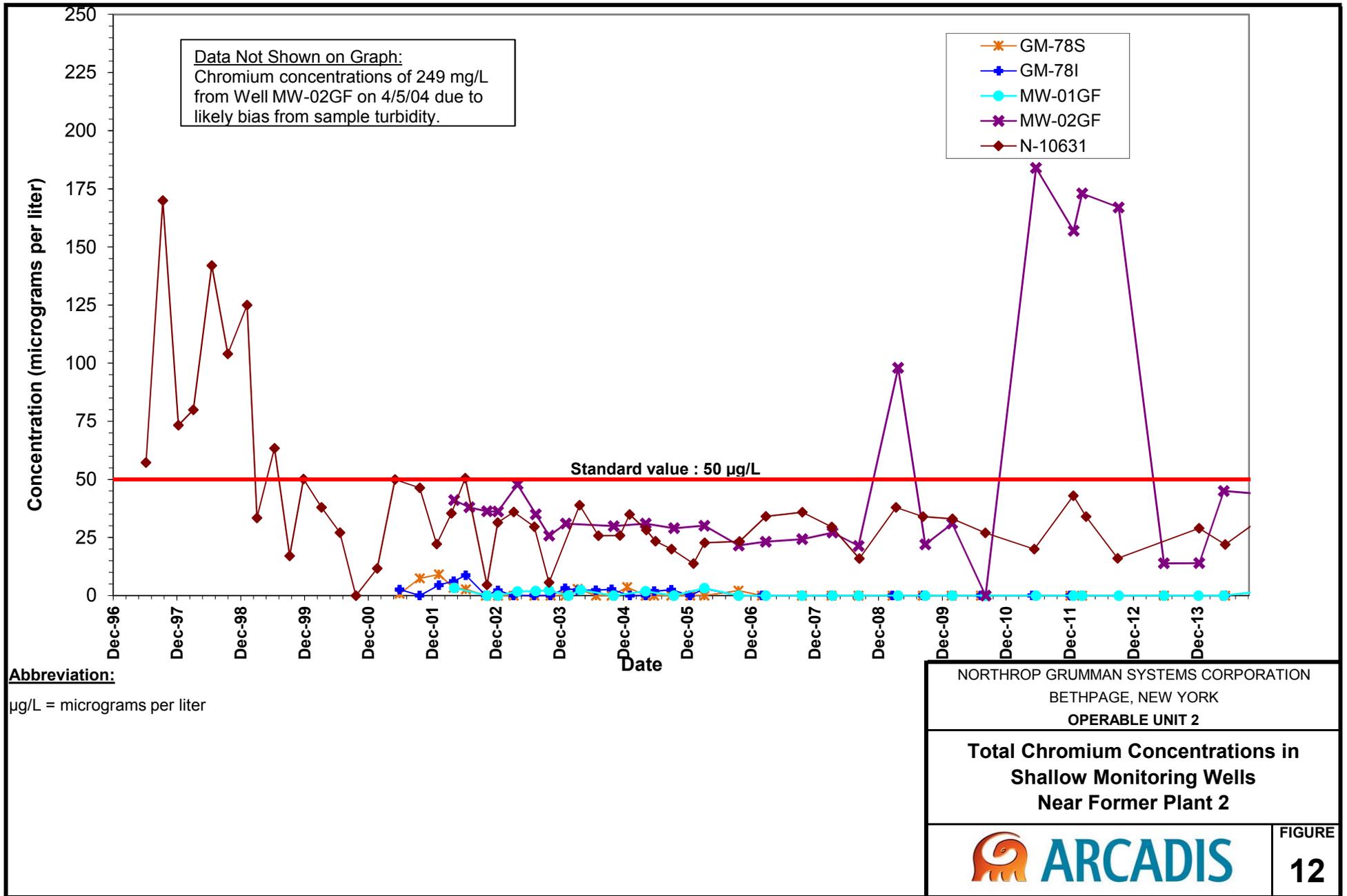
FIGURE **10**

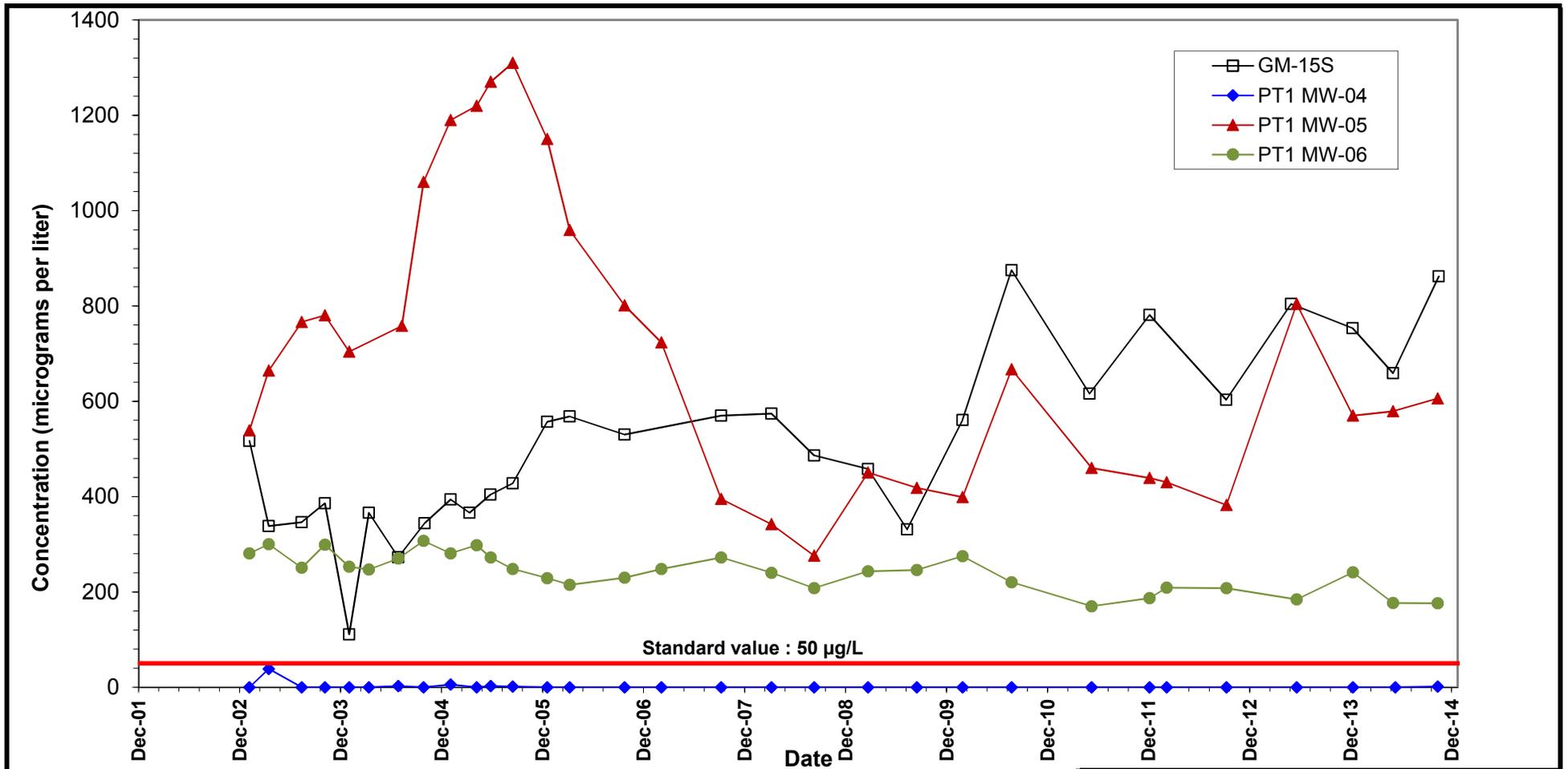


Abbreviation:

µg/L = micrograms per liter

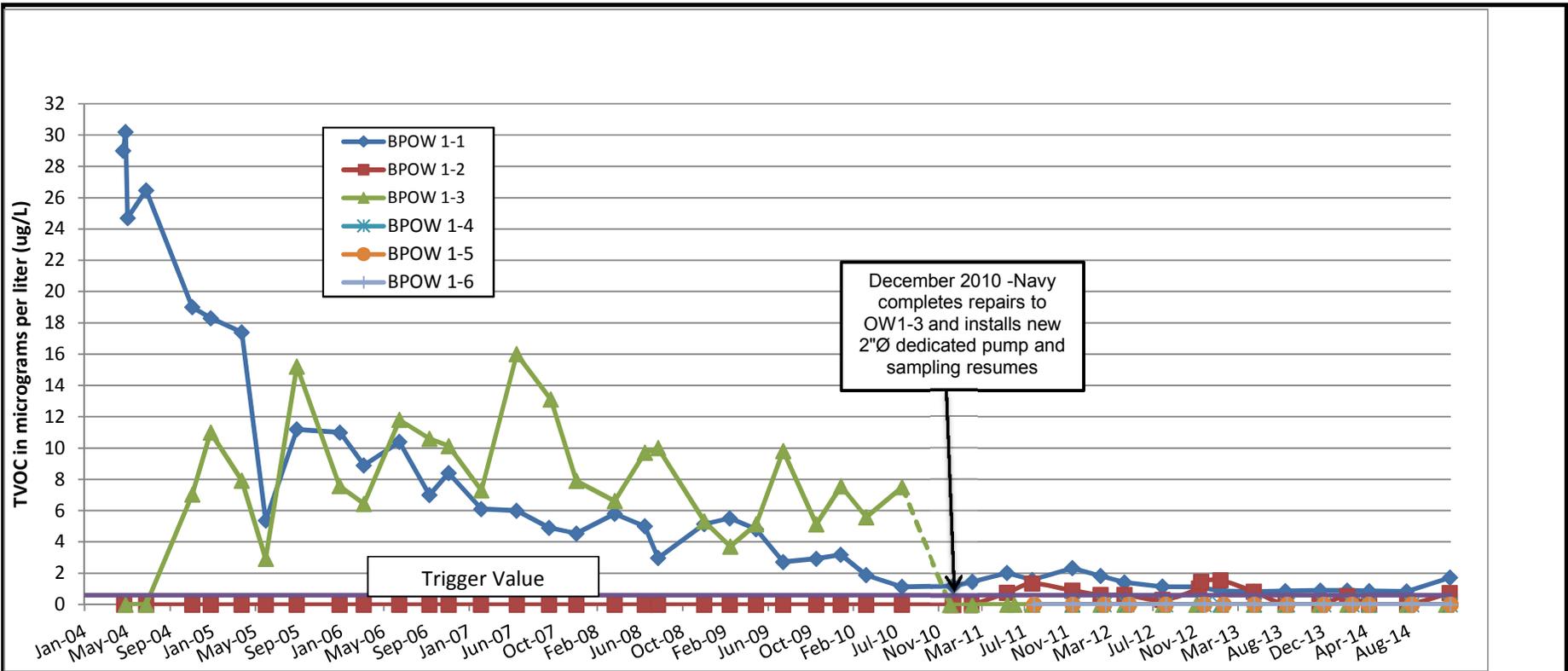
NORTHROP GRUMMAN SYSTEMS CORPORATION BETHPAGE, NEW YORK OPERABLE UNIT 2	
Total Cadmium Concentrations in Shallow Monitoring Wells Near Former Plant 2	
	FIGURE 11





Abbreviation:
 µg/L = micrograms per liter

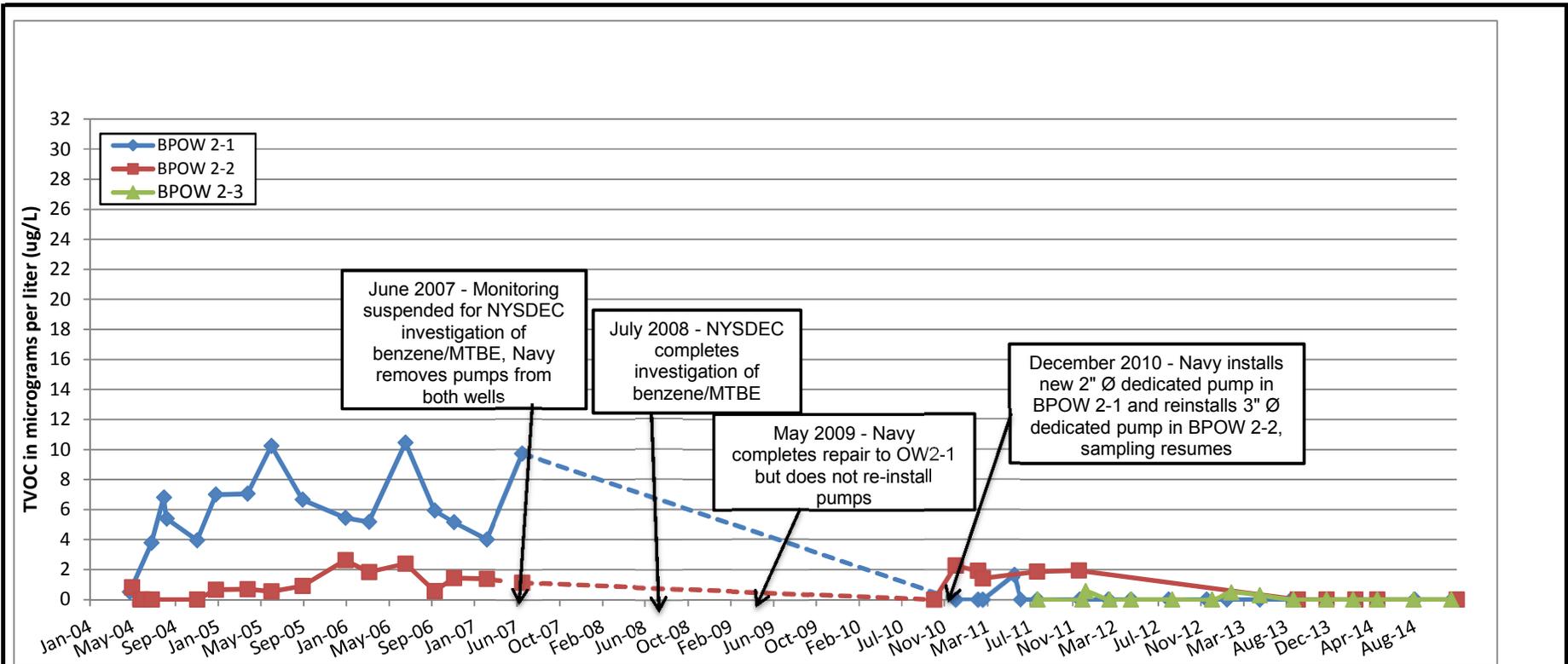
NORTHROP GRUMMAN SYSTEMS CORPORATION BETHPAGE, NEW YORK OPERABLE UNIT 2	
Total Chromium Concentrations in Shallow Monitoring Wells Near Former Plant 1	
	FIGURE 13



Notes and Abbreviations:

Trigger value (0.6 ug/L) was established only for BPOW 1-1, BPOW 1-2 and BPOW 1-3
 VOCs: Volatile Organic Compounds
 TVOCs: Total Volatile Organic Compounds (sum of 14 site-related VOCs constituents only)

NORTHROP GRUMMAN SYSTEMS CORPORATION BETHPAGE, NEW YORK OPERABLE UNIT 2	
TVOC Concentrations Versus Time Outpost Wells BPOW1-1, BPOW1-2, BPOW1-3, BPOW1-4, BPOW1-5 and BPOW1-6 (Wells monitor SFWD Well Field 1)	
	14



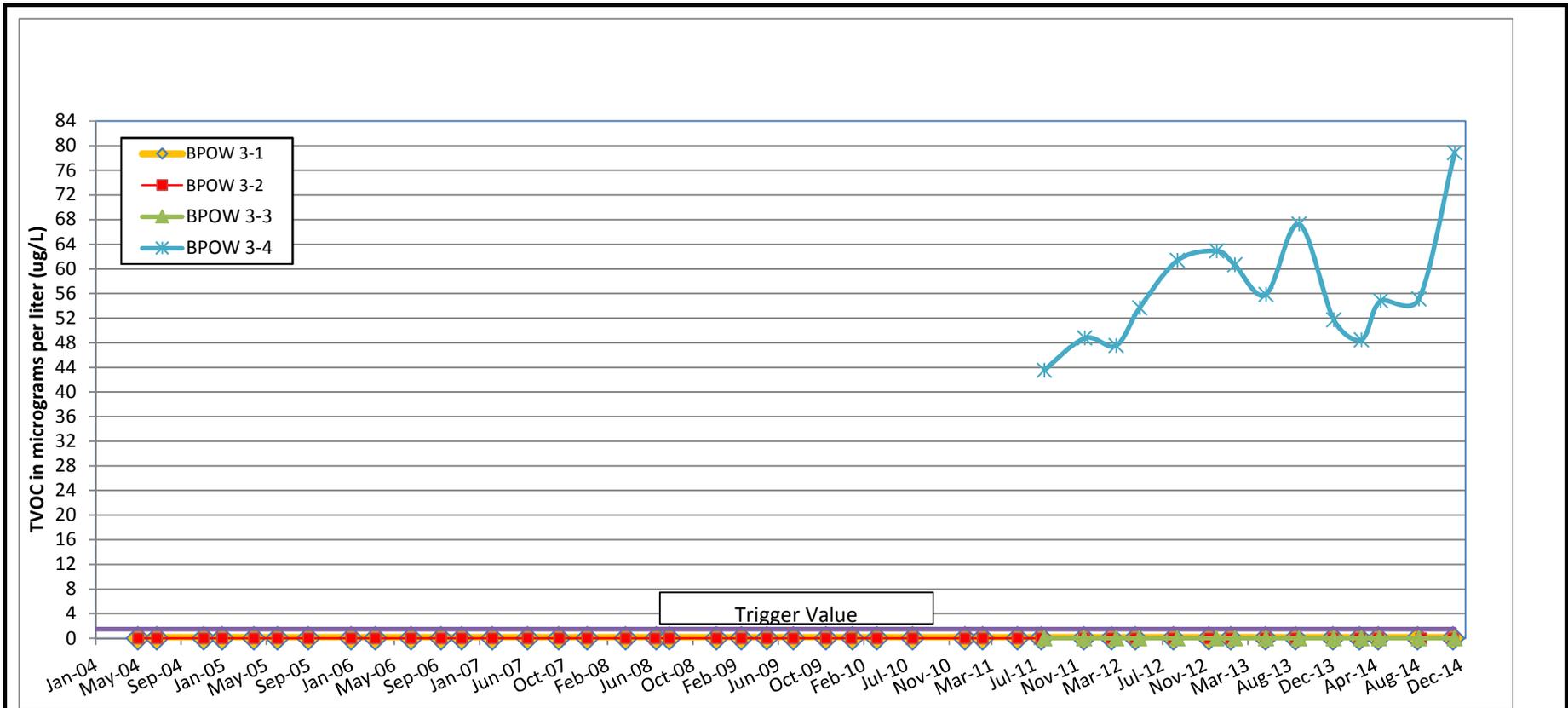
Notes and Abbreviations:

Per the Public Water Supply Contingency Plan, trigger value not established for these wells as plume was located less than five years travel time from SFWD Well 6150 at the time of trigger value calculation

VOCs: Volatile Organic Compounds

TVOCs: Total Volatile Organic Compounds (sum of 14 site-related VOCs constituents only)

NORTHROP GRUMMAN SYSTEMS CORPORATION BETHPAGE, NEW YORK OPERABLE UNIT 2	
TVOCs Concentrations Versus Time Outpost Wells BPOW2-1, BPOW2-2 and BPOW2-3 (Wells Monitor SFWD Well Field 3)	
	15



Notes and Abbreviations:

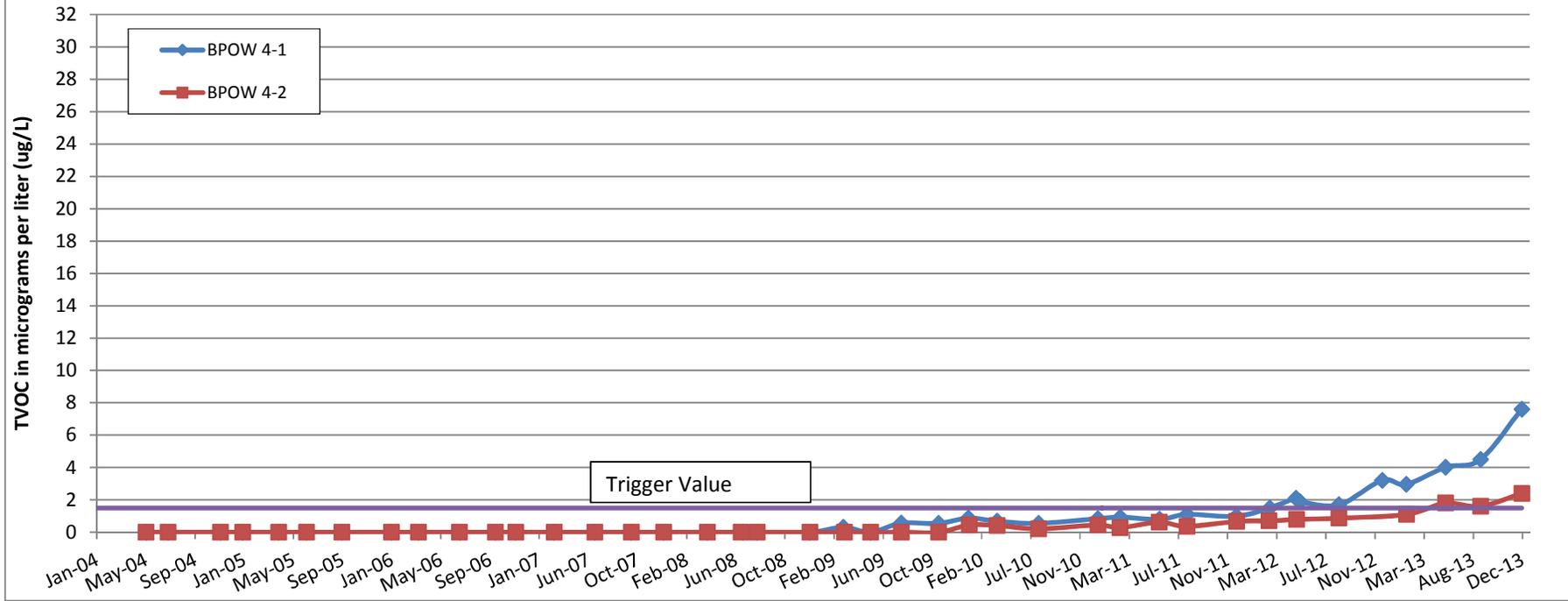
TVOCs for both BPOW 3-1 and BPOW 3-2 are non-detect for the duration of the sample history

Trigger value (1.5µg/L) established only for BPOW 3-1 and BPOW 3-2

VOCs: Volatile Organic Compounds

TVOCs: Total Volatile Organic Compounds (sum of 14 site-related VOCs constituents only)

NORTHROP GRUMMAN SYSTEMS CORPORATION BETHPAGE, NEW YORK OPERABLE UNIT 2	
TVOCs Concentrations Versus Time Outpost Wells BPOW3-1, BPOW3-2, BPOW3-3 and BPOW3-4 (Wells Monitor New York American Seaman's Neck Well Field)	
	16



Notes and Abbreviations:

Samples were not collected from BPOW4-1 and BPOW4-2 in 2014 due to well abandonment/construction activities by NAVY

VOCs: Volatile Organic Compounds

TVOCs: Total Volatile Organic Compounds (sum of 14 site-related VOCs constituents only)

NORTHROP GRUMMAN SYSTEMS CORPORATION
 BETHPAGE, NEW YORK
 OPERABLE UNIT 2

**TVOCs Concentrations Versus Time
 Outpost Wells BPOW4-1 and BPOW4-2
 (Wells Monitor Town of Hempstead
 Levittown Water District Well N-5303)**



ARCADIS

Appendix A

Groundwater Sampling Logs and
Chain of Custody Records

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

Page 1 of 1

<p>Send Results to:</p> <p>Contact & Company Name: 20010 Dulles Rd Farmingdale, NY 11741</p> <p>Address: 20010 Dulles Rd Farmingdale, NY 11741</p> <p>City: Farmingdale, NY 11741 State: NY Zip: 11741</p> <p>Telephone: 631-249-7600 Fax: 631-249-7610 E-mail Address: info@arcadis-us.com</p> <p>Project #: 20010 Dulles Rd Sampler's Printed Name: Tania Alvarado</p>	<p>Preservative Filtered (✓)</p> <p># of Containers</p> <p>Container Information</p>	<p>Container Information Key:</p> <ol style="list-style-type: none"> 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____ 	<p>Preservation Key:</p> <p>A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____</p>	<p>Matrix Key:</p> <p>SE - Sediment SO - Soil W - Water T - Tissue</p> <p>NL - NAPL/Oil SW - Sample Wipe Other: _____</p>	<p>REMARKS</p>	<p>PARAMETER ANALYSIS & METHOD</p>	
<p>Sample ID</p> <p>APB021104 RPAW 1-1 RPAW 1-2</p>	<p>Collection</p> <p>Date: 02/10/13 Time: 1330 02/10/13 1731 02/10/13 1522</p>	<p>Type (✓)</p> <p>Comp: ✓ Grab: ✓ ✓ ✓ ✓</p>	<p>Matrix</p> <p>W W W</p>	<p><input type="checkbox"/> Special QA/QC Instructions (✓):</p> <p style="color: red; font-style: italic;">Please report results to S.D.S. by email.</p>			<p>PARAMETER ANALYSIS & METHOD</p>
<p>Special Instructions/Comments:</p>		<p><input type="checkbox"/> Special QA/QC Instructions (✓):</p>					
<p>Laboratory Information and Receipt</p> <p>Lab Name: <i>ALG Environmental</i></p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements: 24 hours</p> <p>Shipping Tracking #:</p>		<p>Relinquished By</p> <p>Printed Name: <i>Tania Alvarado</i></p> <p>Signature: <i>Tania Alvarado</i></p> <p>Firm/Courier: <i>ALG</i></p> <p>Date/Time: <i>02/10/13</i></p>		<p>Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>		<p>Laboratory Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm: _____</p> <p>Date/Time: _____</p>	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

Page 1 of 1

Send Results to:	Contact & Company Name: <i>Soma Das / Arcadis</i>	Telephone: <i>631-249-7600</i>	Preservative Filtered (✓): <i>B</i>	# of Containers: <i>3</i>	Container Information: <i>1</i>
	Address: <i>24 Huntington Ave Cambridge MA 02142</i>	Fax: <i>631-249-7610</i>	PARAMETER ANALYSIS & METHOD		
City: <i>Cambridge</i>	State: <i>MA</i>	Zip: <i>02142</i>			
Project Name/Location (City, State): <i>MSG 2012 ID Av/Bellingham NY 02147</i>	E-mail Address: <i>Soma.Das@arcadis.com</i>	Project #: <i>132-NAV12</i>	REMARKS		
Sampler's Printed Name: <i>Karla Miranda</i>	Sampler's Signature: <i>[Signature]</i>	Matrix: <i>W</i>			
Sample ID	Collection Date	Type (✓) Comp Grab			
<i>TP021214</i>	<i>021214 0900</i>	<i>✓ W</i>	<input type="checkbox"/> Special QA/QC Instructions (✓):		
<i>BP0W1-3</i>	<i>021214 1230</i>	<i>✓ W</i>			
<i>BP0W2-3</i>	<i>021214 1548</i>	<i>✓ W</i>			

Special Instructions/Comments	Received By	Relinquished By	Laboratory Received By
<p><i>Please report results by email to S.Das</i></p>	Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____	Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____	Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____

Lab Name: <i>AIS Environmental</i>	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Relinquished By	Received By	Laboratory Received By
<input type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: Condition/Cooler Temp: _____	Printed Name: <i>Karla Miranda</i>	Printed Name: Signature: Firm/Courier: Date/Time:	Printed Name: Signature: Firm: Date/Time:
Specify Turnaround Requirements: <i>STANDARD 2 hrs</i>	Shipping Tracking #: <i>1700</i>	Signature: <i>Karla Miranda</i>	Signature: Firm/Courier: Date/Time:	Signature: Firm: Date/Time:



CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

Page 1 of 1

Send Results to:		Contact & Company Name:	
Address:		Telephone:	
City:		Fax:	
State:		E-mail Address:	
Zip:		Project #:	
Project Name/Location (City, State):		Sampler's Printed Name:	
Sampler's Signature:		Sampler's Signature:	

Sample ID	Collection		Type (✓)		Matrix
	Date	Time	Comp	Grab	

Sample ID	Date	Time	Comp	Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD	REMARKS
TB021814	02/18/14	1000	✓	✓	W						
FB021814	02/18/14	1015	✓	✓	W						
BPAW 2-2	02/18/14	1222	✓	✓	W						

Special Instructions/Comments: Special QA/QC Instructions(✓):
 please report results to S. Das by email.

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By	
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Laboratory Received By
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Signature:	Signature:	Signature:	Signature:	Signature:	Printed Name:
Specify Turnaround Requirements:	Sample Receipt:	Firm:	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm:	Signature:
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Firm:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#: _____

Lab Work Order # _____

Page 1 of 1

Send Results to: Contact & Company Name: <u>Soma Das/ARCADIS</u> Address: <u>Washington Quadrangle</u> City: <u>Melville</u> State: <u>NY</u> Zip: <u>11747</u> Telephone: <u>631-391-5247</u> Fax: <u>631-249-7610</u> E-mail Address: <u>Soma.das@arcadis-us.com</u>		Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____	
Project Name/Location (City, State): <u>NY 201416W/Bellpage</u> Project #: _____ Sampler's Printed Name: <u>Karla Michonda</u> Sampler's Signature: _____		Matrix Key: SE - Sediment NL - NAP/LOI SL - Sludge SW - Sample Wipe A - Air Other: _____	
PARAMETER ANALYSIS & METHOD		REMARKS	
Preservative Filtered (✓) _____ # of Containers _____ Container Information _____	[Table with columns for Date, Time, Type (Comp/Grab), Matrix, and Remarks. Contains handwritten entries for TB021914, BPOW 3-2, and BPOW 3-1.]		

Special QA/QC Instructions (✓):

Laboratory Information and Receipt Lab Name: <u>ALS Environmental</u> Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Cooler packed with ice (✓) _____ Specify Turnaround Requirements: <u>STANDARD, 2WK</u> Shipping Tracking #: _____		Received By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____	
Relinquished By Printed Name: <u>Karla Michonda</u> Signature: <u>Karla Michonda</u> Firm: <u>ARCADIS</u> Date/Time: <u>02/19/14 1700</u>		Laboratory Received By Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____	



Infrastructure Water Environment Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:		Telephone: <u>631-391-5247</u>		
Contact & Company Name: <u>SOMA DAS/ARCADIS</u>		Fax: <u>631-249-7610</u>		
Address: <u>2 HUNTINGTON PARKWAY SUITE 1510</u>		E-mail Address: <u>Soma.das@arcadis-us.com</u>		
City: <u>Melville, NY</u> State: <u>NY</u> Zip: <u>11747</u>		Project #: <u>N5002204106W/Bethpage NY</u>		
Project Name/Location (City, State): <u>N5002204106W/Bethpage NY</u>		Sampler's Signature: <u>pat prezorski</u>		
Sampler's Printed Name: <u>pat prezorski</u>		Collection Date: <u>022514</u> Time: <u>0845</u>		
Sample ID	Type (✓)	Matrix	Date	Time
			Comp	Grab
<u>TB022514</u>	<input checked="" type="checkbox"/>	<u>W</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<u>REP022514</u>	<input checked="" type="checkbox"/>	<u>W</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<u>BP0W 3-3</u>	<input checked="" type="checkbox"/>	<u>W</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<u>BP0W 3-4</u>	<input checked="" type="checkbox"/>	<u>W</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Sample ID	Type (✓)	Matrix	Collection		Remarks
			Date	Time	
<u>TB022514</u>	<input checked="" type="checkbox"/>	<u>W</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>REP022514</u>	<input checked="" type="checkbox"/>	<u>W</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>BP0W 3-3</u>	<input checked="" type="checkbox"/>	<u>W</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>BP0W 3-4</u>	<input checked="" type="checkbox"/>	<u>W</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>* MS/MSD</u>

Special Instructions/Comments: please report results by email to S.Das;

Special QA/QC Instructions (✓): please use sample "BP0W 3-4" for MS/MSD

Laboratory information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Lab Name: <u>ALS Environmental</u>	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: <u>pat prezorski</u>	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: <u>STANDARD 2wk</u>	Signature: <u>pat prezorski</u>	Signature:	Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: <u>STANDARD 2wk</u>	Condition/Cooler Temp: _____	Firm: <u>ARCADIS</u>	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm:	Date/Time:
Shipping Tracking #:		Date/Time: <u>02/25/14; 1430</u>	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Send Results to: Contact & Company Name: Address: City: State: Zip:		Telephone: Fax: E-mail Address:	
Project Name/Location (City, State): Project #:		Sampler's Signature: Date: Time:	

Sample ID	Collection Date	Time	Type (✓)		Matrix	REMARKS
			Comp	Grab		
TB022614	02/20/14	10:45		✓	W	
BPOW 1-4	02/20/14	12:10		✓	W	
BPOW 1-5	02/24/14	1:55		✓	W	

Special QA/QC Instructions (✓):

Please report results by email to S. Das;

Laboratory Information and Receipt		Received By		Relinquished By		Laboratory Received By	
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
<input type="checkbox"/> Intact	<input type="checkbox"/> Not Intact	Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
<input type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt:	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm/Courier:
Specify Turnaround Requirements:	Condition/Cooler Temp: _____	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:
Shipping Tracking #:							



ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order #

Contact & Company Name:		Telephone:	Preservative Filtered (✓):	# of Containers:	PARAMETER ANALYSIS & METHOD				REMARKS								
Address:		Fax:	Container Information:	CONTAINER INFORMATION KEY:													
City:	State:	Zip:	E-mail Address:					Matrix Key:	SE - Sediment	NL - NAPL/Oil	SW - Sample Wipe	Other:					
Project Name/Location (City, State):			Project #:		SO - Soil	SL - Sludge	A - Air										
Sampler's Printed Name:			Sampler's Signature:		Date	Time	Comp	Grab	Matrix								
Soma Das / ARCADIS		631-391-5247		3					W	<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> 602 5247 202 </div>							
54 Huntington Quadrangle Suite 1510		631-249-7610		1					W								
Melville NY 11747			soma.das@arcadis-us.com														
Project Name/Location (City, State):			Project #:														
Sampler's Printed Name:			Sampler's Signature:														
<p>Special Instructions/Comments: <input type="checkbox"/> Special QA/QC Instructions(✓):</p> <p style="color: red; font-size: 1.2em;">Please report results by email to S.Das;</p>												Received By		Relinquished By		Laboratory Received By	
<p>Lab Name: <u>ALS Environmental</u></p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements: <u>standard 2 wk</u></p> <p>Shipping Tracking #:</p>												Printed Name:		Printed Name:		Printed Name:	
<p><input type="checkbox"/> Intact <input type="checkbox"/> Not Intact</p> <p>Sample Receipt: _____</p> <p>Condition/Cooler Temp: _____</p>												Signature:		Signature:		Signature:	
												Firm/Courier:		Firm/Courier:		Firm:	
												Date/Time:		Date/Time:		Date/Time:	

CHAIN OF CUSTODY & LABORATORY
ANALYSIS REQUEST FORM

ID#: _____

Lab Work Order # _____

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Contact & Company Name: Soma Das - ARCADIS		Telephone: 631-391-5247	Preservative Filtered (✓) <u>B</u>		PARAMETER ANALYSIS & METHOD	REMARKS
Address: 2 Hunterdon Quad Melville NY 11747		Fax: 631-249-7610	# of Containers Container Information			
City Melville NY		E-mail Address: Soma.Das@arcadis-us.com	Matrix Key: A. H ₂ SO ₄ B. HCl C. HNO ₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____ I. Other: _____			
Project Name/Location (City, State): N-Greenway 002 64th Ave, NY		Project #: 14304	Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____			
Sampler's Printed Name: Soma Das		Sampler's Signature: <i>Soma Das</i>		Matrix Key: SE - Sediment SW - Sample Wipe A - Air NL - NAPL/Oil SL - Sludge SW - Sample Wipe Other: _____		
Sample ID		Collection	Type (✓)	Matrix		
BPOW 3-2		Date: 4/15/14 1624	Time: _____ Comp: _____ Grab: ✓	W		
BPOW 3-1		Date: 4/15/14 1338	Time: _____ Comp: _____ Grab: ✓	W		
TBOY1514		Date: 4/15/14 1200	Time: _____ Comp: _____ Grab: ✓	W		
Special Instructions/Comments: CU2 Hydro <input type="checkbox"/> Special QA/QC Instructions (✓):						
Laboratory Information and Receipt		Received By		Relinquished By		Laboratory Received By
Lab Name: ALS Env	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: <i>Soma Das</i>		Printed Name:		Printed Name:
<input checked="" type="checkbox"/> Cooler packed with ice (✓) Yes	Sample Receipt: Standard TAT	Signature: <i>Soma Das</i>		Signature:		Signature:
Specify Turnaround Requirements: Standard TAT	Condition/Cooler Temp: _____	Firm: ARCADIS INC		Firm/Courier:		Firm:
Shipping Tracking #		Date/Time: 4/15/14		Date/Time:		Date/Time:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order # _____

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Contact & Company Name: Soma Das - ARCADIS Address: 2 Huntington-Great Neck, Suite City: Melville NY 11747 State: NY Zip: 11747 E-mail Address: Sdas@arcadis-usa.com Telephone: 631-391-5247 Fax: 631-249-7610		Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____	
Preservation Key: A. H ₂ SO ₄ B. HCL C. HNO ₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____		Matrix Key: SE - Sediment SL - Sludge A - Air SO - Soil W - Water T - Tissue NL - NAPL/Oil SW - Sample Wipe Other: _____	
PARAMETER ANALYSIS & METHOD			
Project Name/Location (City, State): W-Greene OUZ Bethpage, NY Sampler's Printed Name: Pat Perent, Stephen Schwarz			

Sample ID	Date	Time	Collection		Type (✓)		Matrix	REMARKS
			Date	Time	Comp	Grab		
TB041714	4/17/14	0900			✓		W	9 vials - MS/MSO Sample
BPOW 1-3	4/17/14	1224			✓		W	
BPOW 1-2	4/17/14	1410			✓		W	
BPOW 1-1	4/17/14	1513			✓	*	W	

Special QA/QC Instructions (✓): _____

OU2 - Hydro

Special Instructions/Comments: ALS Env Cooler packed with ice (✓) Specify Turnaround Requirements: Standard TAT Shipping Tracking #: _____		Laboratory Information and Receipt Lab Name: _____ Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Sample Receipt: _____ Condition/Cooler Temp: _____		Relinquished By Printed Name: Pat Perent Signature: Pat Perent Firm/Courier: ARCADIS Date/Time: 4/17/14 1730		Received By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____		Relinquished By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____		Laboratory Received By Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____	
---	--	---	--	---	--	--	--	--	--	---	--

Distribution: **WHITE** - Laboratory returns with results **YELLOW** - Lab copy **PINK** - Retained by ARCADIS

ID#: _____

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order # _____

Contact & Company Name: Soma Des - Arcadis 2 Huntington Blvd 1510 Melville NY 11747 Project Name/Location (City, State): Northrop Grumman CW2 Project #: NY101496.0914, NAV I-2 Sampler's Printed Name: AT Vincenti Sampler's Signature: [Signature]	Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: soma.des@arcadis-usa.com	Keys Preservation Key: A. H ₂ SO ₄ B. HCL C. HNO ₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____ Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____ Matrix Key: SO - Soil W - Water T - Tissue SE - Sediment SL - Sludge A - Air NL - NAPL/OIL SW - Sample Wipe Other: _____
--	---	--

Sample ID	Collection		Type		Matrix	REMARKS
	Date	Time	Comp	Grab		
T8042214	4/22/14	1300	V	W		USER M441 USEM 5247
BP0423-4	4/22/14	1320	V	W		
Rep042214	4/22/14	—	V	W		
BP0422-1	4/22/14	1722	V	W		

Special Instructions/Comments: Special QA/QC Instructions (✓):

OU2 - Hydro

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Lab Name: ALSEN	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input checked="" type="checkbox"/> Not Intact	Printed Name: [Signature]							
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: Standard 7A-7	Signature: [Signature]							
Specify Turnaround Requirements: Standard 7A-7	Condition/Cooler Temp: _____	Firm: ARCADIS	Firm/Courier: ARCADIS						
Shipping Tracking #:		Date/Time: 4/22/14/1840	Date/Time: 						

Contact & Company Name: Xuan Xu ARCADIS
Address: 2 Huntington Blvd, Suite 1510, Malville NY 11747
City: Malville NY 11747
State: NY **Zip:** 11747
E-mail Address: Xuan.Xu@arcadis-us.com
Telephone: 631-249-7600
Fax: 631-249-7610
Project #: 02 Workshop Groundwater
Project Name/Location (City, State): 02 Workshop Groundwater
Sampler's Printed Name: Stephen Schwarz
Sampler's Signature: [Signature]
Permit #:

Sample ID	Collection Date	Time	Type (✓)		Matrix
			Comp	Grab	
TB042414	4-24-14	0900	✓		W
FB042414	4-24-14	1045	✓		W
GM-34D2	4-24-14	1215	✓		W
GM-34D	4-24-14	1418	✓		W

Preservation Key:
A. H₂SO₄
B. HCl
C. HNO₃
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SE - Sediment
SO - Soil
W - Water
T - Tissue
A - Air

Container Information Key:
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

REMARKS

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Time	Type (✓)	Matrix	Preservative Filtered (✓)	# of Containers	Container Information	Received By	Relinquished By	Received By	Relinquished By	Received By	Relinquished By
TB042414	4-24-14	0900	✓	W		1							
FB042414	4-24-14	1045	✓	W		1							
GM-34D2	4-24-14	1215	✓	W		1							
GM-34D	4-24-14	1418	✓	W		1							

Special Instructions/Comments: Ouz Hydro Please use: NYSDEC ASP Method 2005/OLM 4.3

Special QA/QC Instructions (✓):

Laboratory Information and Receipt

Lab Name: ALS Environmental Serv. Cooler packed with ice (✓)

Cooler packed with ice (✓)

Specify Turnaround Requirements: STD

Shipping Tracking #: []

Laboratory Information and Receipt

Lab Name: []
Printed Name: []
Signature: []
Firm: []
Date/Time: []

Received By: []
Printed Name: []
Signature: []
Firm/Courier: []
Date/Time: []

Relinquished By: []
Printed Name: []
Signature: []
Firm/Courier: []
Date/Time: []

Received By: []
Printed Name: []
Signature: []
Firm/Courier: []
Date/Time: []

Relinquished By: []
Printed Name: []
Signature: []
Firm/Courier: []
Date/Time: []

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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<p>Contact & Company Name: Sara Des - ARCADIS Address: 2 Huntington Blvd, Suite 1500 City: Melville NY 11747 State: NY Zip: 11747</p> <p>Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: Sara.Des@arcadis-us.com</p>	<p>Preservative Filtered (✓) # of Containers Container Information</p>	<p>8 3 1</p>	<p>PARAMETER ANALYSIS & METHOD</p>	<p>Matrix Key: SE - Sediment SL - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other:</p>	<p>REMARKS</p>
<p>Send Results to: Project Name/Location (City, State): N-Garmon 002-13-41002-NY Sampler's Printed Name: Stephen Schwa Sampler's Signature: [Signature]</p>	<p>Keys</p> <p>Preservation Key: A. H₂SO₄ B. HCl C. HNO₃ D. NaOH E. None F. Other: G. Other: H. Other:</p> <p>Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:</p>				
<p>Sample ID</p> <p>TB042814 GM-36D2 GM-36D</p>	<p>Collection</p> <p>Date: 4/20/14 0900 Type: Comp ✓ Grab ✓ Matrix: W</p> <p>Date: 4/20/14 1247 Type: Comp ✓ Grab ✓ Matrix: W</p> <p>Date: 4/20/14 1451 Type: Comp ✓ Grab ✓ Matrix: W</p> <p style="text-align: right; color: red;">GM-36D</p>				
<p><input type="checkbox"/> Special QA/QC Instructions (✓):</p>					
<p>Special Instructions/Comments:</p> <p style="font-size: 2em; color: red;">OU-2 Hydro</p>					
<p>Laboratory Information and Receipt</p> <p>Lab Name: ALS Env <input type="checkbox"/> Cooler packed with ice (✓) Specify Turnaround Requirements: Standard Shipping Tracking #:</p>		<p>Received By</p> <p>Printed Name: Signature: Firm/Courier: Date/Time:</p>		<p>Relinquished By</p> <p>Printed Name: Signature: Firm/Courier: Date/Time:</p>	
<p>Cooler Custody Seal (✓)</p> <p><input type="checkbox"/> Intact <input type="checkbox"/> Not Intact</p> <p>Sample Receipt:</p> <p>Condition/Cooler Temp: 16.30</p>		<p>Received By</p> <p>Printed Name: [Signature] Signature: [Signature] Firm/Courier: ARCADIS Date/Time: 4/20/14 1630</p>		<p>Relinquished By</p> <p>Printed Name: Signature: Firm/Courier: Date/Time:</p>	
<p>Laboratory Received By</p> <p>Printed Name: Signature: Firm: Date/Time:</p>					

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Contact & Company Name: Bothago Water District
 Address: 14300 Bothago Way
 City: _____ State: _____ Zip: _____
 Telephone: _____
 Fax: _____
 E-mail Address: _____
 Project #: _____
 Project Name/Location (City, State): Northrop Grumman Bothago, NJ
 Sampler's Printed Name: Pat Perrotti Stephen Schmitz
 Sampler's Signature: [Signature]

Sample ID	Collection Date	Time	Type	Type (✓)		Matrix	Remarks
				Comp	Grab		
<u>GM-36Dz</u>	<u>4/29/14</u>	<u>1247</u>	<u>W</u>	<input checked="" type="checkbox"/>		<u>W</u>	
<u>GM-36D</u>	<u>4/29/14</u>	<u>1431</u>	<u>W</u>	<input checked="" type="checkbox"/>		<u>W</u>	

PARAMETER ANALYSIS & METHOD

Preservative Filtered (✓) 1

of Containers 2

Container Information 1

Keys

Container Information Key:

- 40 ml Vial
- 1 L Amber
- 250 ml Plastic
- 500 ml Plastic
- Encore
- 2 oz. Glass
- 4 oz. Glass
- 8 oz. Glass
- Other: _____
- Other: _____

Preservation Key:

- H₂SO₄
- HCL
- HNO₃
- NaOH
- None
- Other: _____

Matrix Key:

- SE - Sediment
- SO - Soil
- SW - Sludge
- W - Water
- T - Tissue
- NL - NAPL/Oil
- SW - Sample Wipe
- A - Air
- Other: _____

REMARKS

Special Instructions/Comments: Special QA/QC Instructions (✓): No-Hoop Grumman Spot Sampling

Laboratory Information and Receipt		Received By		Relinquished By	
Lab Name: <u>ALTA PAC</u>	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: <u>Pat Perrotti</u>	Printed Name: <u>Pat Perrotti</u>	Printed Name: _____	Printed Name: _____
<input checked="" type="checkbox"/> Cooler packed with ice (✓) <u>Yes</u>	Sample Receipt: <u>ARCADIS</u>	Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature: _____	Signature: _____
Specify Turnaround Requirements: <u>standard</u>	Condition/Cooler Temp: _____	Firm: <u>ARCADIS</u>	Firm/Courier: <u>PACE ANALYTICAL</u>	Firm: _____	Firm: _____
Shipping Tracking #: _____		Date/Time: <u>4/29/14 11:50am</u>	Date/Time: <u>4/29/14 11:50</u>	Date/Time: _____	Date/Time: _____

ID#: _____

Contact & Company Name: Some Das - ARCADIS Address: 2 Huntington Quad Suite 1510 City: Mdville NY 11747 State: NY Zip: 11747 Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: Some.das@arcadis-us.com		Preservative Filtered (✓) 8 # of Containers 9 Container Information 1		Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:	
Send Results to: Project Name/Location (City, State): Northrop Communities Bldg 002, Mdville, NY Sampler's Printed Name: Val B. Schaefer Sampler's Signature:		PARAMETER ANALYSIS & METHOD (Handwritten notes: 2005/12/14, 2005/12/14, 2005/12/14)			
Matrix Key: SE - Sediment SL - Sludge A - Air SO - Soil W - Water T - Tissue NL - NAPL/Oil SW - Sample Wipe Other:		REMARKS			
Sample ID	Collection Date	Time	Type (✓)		Matrix
			Comp	Grab	
T8042914	4/29/14	1000	✓		W
R8042914	4/29/14	—	✓		W
GM-38D	4/29/14	1313	✓		W
GM-38D2	4/29/14	1210	✓		W
Special Instructions/Comments: OU 2 Hydro					
<input type="checkbox"/> Special QA/QC Instructions(✓):					
Laboratory Information and Receipt Lab Name: ALS ENV <input type="checkbox"/> Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Sample Receipt: Condition/Cooler Temp:		Relinquished By Printed Name: [Signature] Signature: [Signature] Firm/Courier: ARCADIS Date/Time: 4/29/14 1650		Received By Printed Name: Signature: Firm/Courier: Date/Time:	
Shipping Tracking #:		Laboratory Received By Printed Name: Signature: Firm: Date/Time:		Laboratory Received By Printed Name: Signature: Firm: Date/Time:	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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<p>Send Results to:</p> <p>Contact & Company Name: <i>Bohagge Water District</i></p> <p>Address: <i>14900 20th St, Silver Spring, MD 20910</i></p> <p>City: _____ State: _____ Zip: _____</p> <p>Telephone: _____</p> <p>Fax: _____</p> <p>E-mail Address: _____</p>	<p>Preservative Filtered (✓)</p> <p># of Containers</p> <p>Container Information</p>	<p><i>B</i></p> <p><i>2</i></p> <p><i>1</i></p>	<p>PARAMETER ANALYSIS & METHOD</p>	<p>Keys</p> <p>Preservation Key:</p> <p>A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____</p> <p>Container Information Key:</p> <p>1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz Glass 7. 4 oz Glass 8. 8 oz Glass 9. Other: _____ 10. Other: _____</p> <p>Matrix Key:</p> <p>SE - Sediment NL - NAP/IOI W - Water SW - Sample Wipe T - Tissue A - Air Other: _____</p>	<p>REMARKS</p> <p><i>550A</i></p> <p><i>GM-38D</i></p> <p><i>GM-38D2</i></p>
<p><input type="checkbox"/> Special QA/QC Instructions (✓):</p> <p style="font-size: 2em; color: red; text-align: center;">No-thp German Spill sample</p>					
<p>Special Instructions/Comments:</p>					
<p>Laboratory Information and Receipt</p> <p>Lab Name: <i>Pace</i></p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements: _____</p> <p>Shipping Tracking #: _____</p>		<p>Relinquished By</p> <p>Printed Name: <i>Kat Bryant</i></p> <p>Signature: <i>[Signature]</i></p> <p>Firm/Courier: <i>ARCADIS</i></p> <p>Date/Time: <i>4/29/14 1620</i></p>		<p>Received By</p> <p>Printed Name: <i>[Signature]</i></p> <p>Signature: <i>[Signature]</i></p> <p>Firm/Courier: <i>PACIE</i></p> <p>Date/Time: <i>4/29/14 1120</i></p>	
<p>Laboratory Information and Receipt</p> <p>Lab Name: _____</p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements: _____</p> <p>Shipping Tracking #: _____</p>		<p>Relinquished By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>		<p>Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>	
<p>Laboratory Information and Receipt</p> <p>Lab Name: _____</p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements: _____</p> <p>Shipping Tracking #: _____</p>		<p>Relinquished By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>		<p>Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order # _____

<p>Contact & Company Name: Soma Das - ARCADIS Address: 2 Huntington Ave Suite 1510 City: Melville NY 11747 State: NY Zip: 11747</p> <p>Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: Soma.das@arcadis-us.com</p> <p>Project #: NY00196.03N.GMMI2 Sampler's Printed Name: Przemek Schwilz Sampler's Signature: <i>[Signature]</i></p>	<p>Preservative Filtered (✓) # of Containers Container Information</p>	<p>B -3 1</p>	<p>PARAMETER ANALYSIS & METHOD</p>	<p>Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____</p> <p>Preservation Key: A. H₂SO₄ B. HCl C. HNO₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____</p> <p>Matrix Key: SE - Sediment SL - Sludge A - Air SO - Soil W - Water T - Tissue NL - NAP/OLI SW - Sample Wipe Other: _____</p>	<p>REMARKS</p> <p>4th VOCs App Mtg 4/23 MSOC App Mtg 5/05</p>
<p>Sample ID</p> <p>TBOY3014 GM-3502 GM-7002</p>	<p>Collection Date</p> <p>4/24/14 4/24/14 4/24/14</p>	<p>Time</p> <p>0900 1130 1723</p>	<p>Type (✓)</p> <p>Comp Grab</p>	<p>Matrix</p> <p>W W W</p>	<p>REMARKS</p>
<p>Special Instructions/Comments: Ouz Hydro</p> <p><input type="checkbox"/> Special QA/QC Instructions (✓):</p>					
<p>Laboratory Information and Receipt</p> <p>Lab Name: ALS Env <input type="checkbox"/> Cooler packed with ice (✓) Specify Turnaround Requirements: Standard Shipping Tracking #: _____</p>		<p>Relinquished By</p> <p>Printed Name: Pat Arrosti Signature: <i>[Signature]</i> Firm: ARCADIS Date/Time: 4/30/14/1830</p>		<p>Received By</p> <p>Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	
<p>Laboratory Information and Receipt</p> <p>Lab Name: _____ <input type="checkbox"/> Cooler packed with ice (✓) Specify Turnaround Requirements: _____ Shipping Tracking #: _____</p>		<p>Relinquished By</p> <p>Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____</p>		<p>Received By</p> <p>Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

<p>Contact & Company Name: Address: <u>Bothpage Lake District</u> City: _____ State: _____ Zip: _____ E-mail Address: _____ Telephone: _____ Fax: _____</p>	<p>Preservative Filtered (✓) <u>1</u> # of Containers <u>2</u> Container Information <u>1</u></p>	<p>PARAMETER ANALYSIS & METHOD</p>	<p>Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____</p> <p>Preservation Key: A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____</p> <p>Matrix Key: SE - Sediment SO - Soil W - Water T - Tissue SL - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other: _____</p>
<p>Send Results to: Project Name/Location (City, State): <u>Northrop Grumman on Bothpage Lake, NY</u> Sampler's Printed Name: <u>Yves Schwab</u> Sampler's Signature: <u>[Signature]</u></p>	<p>REMARKS</p>		
<p>Sample ID <u>GM-35D2</u> <u>GM-70D2</u></p>	<p>Collection Date: <u>4/26/14</u> Time: <u>1130</u></p>	<p>Type (✓) Comp: _____ Grab: <u>✓</u></p>	<p>Matrix <u>W</u> <u>W</u></p>
<p><input type="checkbox"/> Special QA/QC Instructions (✓):</p> <p style="font-size: 2em; color: red;">Northrop Grumman split samples</p>			
<p>Special Instructions/Comments:</p>			
<p>Laboratory Information and Receipt</p>			
<p>Lab Name: <u>Pace</u></p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements:</p> <p>Shipping Tracking #:</p>	<p>Received By Printed Name: <u>Group Cappucco</u> Signature: <u>[Signature]</u> Firm/Courier: <u>PACE ANALYTICAL</u> Date/Time: <u>4/26/14 17:50</u></p>	<p>Relinquished By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	<p>Laboratory Received By Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____</p>
<p>Distribution: WHITE - Laboratory returns with results YELLOW - Lab copy PINK - Retained by ARCADIS</p>			

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#: _____

Lab Work Order # _____

Contact & Company Name: Sarna Des - ARCADIS Address: 2 Huntington Quad, Suite 1510 City: Melville, NY 11747 State: NY Zip: 11747 Telephone: 631-391-5247 Fax: 631-249-7610 Email Address: sarna.des@arcadis-us.com		Preservative Filtered (✓) <u>B</u> # of Containers <u>3</u> Container Information <u>1</u>		Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:			
Send Results to: Project Name/Location (City, State): Northrop Grumman Ouz 2 Project #: N1401496.0314.GM112 Sampler's Printed Name: Kresok Schwart Sampler's Signature: <i>[Signature]</i>		PARAMETER ANALYSIS & METHOD					
Sample ID TB050114 GM-71D2 GM-18D		Collection Date: 5/11/14 0900 5/11/14 1205 5/14/14 1615		Type (✓) Comp: _____ Grab: _____			
Matrix W W W		REMARKS MS/MSD sample					
Special Instructions/Comments: Ouz 2 Hydraz Please use GM-71D2 sample as QA/QC MS/MSD							
Laboratory Information and Receipt Lab Name: ALS Env Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Cooler packed with ice (✓) Specify Turnaround Requirements: y22 Standard Shipping Tracking #:		Received By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____		Relinquished By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____			
Condition/Cooler Temp: _____		Laboratory Received By Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____		Laboratory Received By Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____			

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

Page 1 of 1

<p>Send Results to:</p> <p>Contact & Company Name: <i>Battage Water Control</i></p> <p>Address: City: _____ State: _____ Zip: _____</p> <p>Telephone: _____</p> <p>Fax: _____</p> <p>E-mail Address: _____</p>	<p>Project Name/Location (City, State): <i>Northrop Grumman Ouz-Battage</i></p> <p>Project #:</p> <p>Sampler's Printed Name: <i>S. Schwartz</i></p> <p>Sampler's Signature: <i>[Signature]</i></p>	<p>Preservative</p> <p>Filtered (✓)</p> <p># of Containers</p> <p>Container Information</p>	<p>Matrix</p> <p>Type (✓)</p> <p>Comp</p> <p>Grab</p>	<p>PARAMETER ANALYSIS & METHOD</p>	<p>Preservation Key:</p> <p>A. H₂SO₄</p> <p>B. HCl</p> <p>C. HNO₃</p> <p>D. NaOH</p> <p>E. None</p> <p>F. Other:</p> <p>G. Other:</p> <p>H. Other:</p> <p>Matrix Key:</p> <p>SO - Soil</p> <p>W - Water</p> <p>T - Tissue</p>	<p>Container Information Key:</p> <p>1. 40 ml Vial</p> <p>2. 1 L Amber</p> <p>3. 250 ml Plastic</p> <p>4. 500 ml Plastic</p> <p>5. Encore</p> <p>6. 2 oz. Glass</p> <p>7. 4 oz. Glass</p> <p>8. 8 oz. Glass</p> <p>9. Other:</p> <p>10. Other:</p> <p>Matrix Key:</p> <p>SE - Sediment</p> <p>SL - Sludge</p> <p>A - Air</p> <p>NL - NAPL/Oil</p> <p>SW - Sample Wipe</p> <p>Other:</p>	<p>REMARKS</p>
<p>Sample ID: <i>GM-71D2</i></p> <p>Date: <i>5/11/05</i></p> <p>Time: _____</p> <p>Collection: _____</p> <p>Matrix: <i>W</i></p>		<p>Preservative: <i>B</i></p> <p>Filtered (✓): <i>2</i></p> <p># of Containers: <i>1</i></p>		<p>Matrix: <i>W</i></p> <p>Type (✓): _____</p> <p>Comp: _____</p> <p>Grab: _____</p>		<p>Special Instructions/Comments: <i>Northrop Grumman Spill Sample</i></p> <p><input type="checkbox"/> Special QA/QC Instructions (✓):</p>	
<p>Lab Name: <i>Pace</i></p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements:</p> <p>Shipping Tracking #:</p>		<p>Laboratory Information and Receipt</p> <p>Cooler Custody Seal (✓)</p> <p><input type="checkbox"/> Intact <input type="checkbox"/> Not Intact</p> <p>Sample Receipt:</p> <p>Condition/Cooler Temp: _____</p>		<p>Relinquished By</p> <p>Printed Name: <i>Pat Rezenti</i></p> <p>Signature: <i>[Signature]</i></p> <p>Firm: <i>ARCADIS</i></p> <p>Date/Time: <i>5/11/05</i></p>		<p>Received By</p> <p>Printed Name: <i>Tommy Spoo</i></p> <p>Signature: <i>[Signature]</i></p> <p>Firm/Courier: <i>ARCADIS</i></p> <p>Date/Time: <i>5/11/05</i></p>	
<p>Laboratory Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm: _____</p> <p>Date/Time: _____</p>		<p>Relinquished By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>		<p>Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>		<p>Laboratory Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm: _____</p> <p>Date/Time: _____</p>	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order # _____

<p>Contact & Company Name: Somma Das ARCADIS Address: 2 Huntington Quad, Suite 1510 City: Melville NY 11747 State: NY Zip: 11747 E-mail Address: Somma.Das@arcadis-us.com Project #: NY1001496.0314.6-WMEZ Sampler's Printed Name: K. M. Coody Signature: <i>[Signature]</i></p>	<p>Telephone: 631-249-7600 Fax: 631-249-7610 Project #: NY1001496.0314.6-WMEZ Sampler's Signature: <i>[Signature]</i></p>	<p>Preservative: B Filtered (✓): # of Containers: 3 Container Information:</p>	<p>Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____</p>
PARAMETER ANALYSIS & METHOD			
Sample ID	Collection Date	Type (✓)	Matrix
T8050814	5-5-14 0900	Comp ✓	W
G-M-13D	5-5-14 1135	Grab ✓	W
G-M-17D	5-5-14 1408	Comp ✓	W
G-M-17I	5-5-14 1602	Grab ✓	W
REMARKS			
<p>Special Instructions/Comments: Ouz Hydro <input type="checkbox"/> Special QA/QC Instructions(✓):</p>			
Laboratory Information and Receipt			
<p>Lab Name: ALS Environmental/Soil <input type="checkbox"/> Cooler packed with ice (✓) Specify Turnaround Requirements: STD Shipping Tracking #: _____</p>	<p>Reinquinshed By: Stephen Schwarz Printed Name: _____ Signature: <i>[Signature]</i> Firm: Arcadis Date/Time: 05/06/14; 1730</p>	<p>Received By: Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	<p>Laboratory Received By: Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____</p>
<p>Condition/Cooler Temp: _____ Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS</p>			

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

Page 1 of 1

<p>Send Results to:</p> <p>Contact & Company Name: <u>Santa Rosa - ARCADIS</u></p> <p>Address: <u>2 Huntington Blvd Suite 150</u></p> <p>City: <u>Melville NY</u> State: <u>NY</u> Zip: <u>11747</u></p> <p>Telephone: <u>631-391-5247</u></p> <p>Fax: <u>631-249-7610</u></p> <p>E-mail Address: <u>SantaRosa@arcadis-usa.com</u></p> <p>Project Name/Location (City, State): <u>W-Garmon 022 Bathpage NY</u></p> <p>Project #: <u>NY00146.034.GAR 22</u></p> <p>Sampler's Printed Name: <u>Pat Perzorski/Stephen Schwarz</u></p> <p>Sampler's Signature: <u>[Signature]</u></p>	<p>Preservative</p> <p>Filtered (✓) <u>3</u></p> <p># of Containers <u>3</u></p> <p>Container Information <u>1</u></p>	<p>PARAMETER ANALYSIS & METHOD</p> <p><i>USE VCS Method MSDC per Method 2005 form 412</i></p>	<p>REMARKS</p> <p><u>TB050614</u></p> <p><u>GM-37D</u></p> <p><u>GM-3702</u></p>
<p><input type="checkbox"/> Special QA/QC Instructions (✓):</p>			
<p>Special Instructions/Comments:</p> <p style="font-size: 2em; color: red;">Ouz - Hydro</p>			
<p>Lab Name: <u>ALS ENV</u></p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements: <u>yes</u></p> <p>Shipping Tracking #: <u>standard</u></p>	<p>Relinquished By</p> <p>Printed Name: <u>Pat Perzorski</u></p> <p>Signature: <u>[Signature]</u></p> <p>Firm/Courier: <u>ARCADIS</u></p> <p>Date/Time: <u>5/16/14 1730</u></p>	<p>Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>	<p>Laboratory Information and Receipt</p> <p>Cooler Custody Seal (✓)</p> <p><input type="checkbox"/> Intact <input type="checkbox"/> Not Intact</p> <p>Sample Receipt: _____</p> <p>Condition/Cooler Temp: _____</p>
		<p>Relinquished By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>	<p>Laboratory Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm: _____</p> <p>Date/Time: _____</p>

Contact & Company Name: Sava Des - ARCADIS Address: 2 Huntington Quad Seta 1510 City: Melville NY 11747 State: NY Zip: 11747 E-mail Address: Sava.Des@arcadis-us.com Project #: NY011496.0314.GM132 Sampler's Printed Name: Vincent Schwarz Sampler's Signature: <i>[Signature]</i>		Telephone: 631-391-5247 Fax: 631-249-7610		Preservative Filtered (✓) B C C C C C # of Containers 3 1 1 3 3 3 Container Information 1 3 3 3 3 3		Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____ Matrix Key: SE - Sediment NL - NAPL/Oil SW - Sample Wipe SL - Sludge SW - Sample Wipe A - Air Other: _____																	
Send Results to: Project Name/Location (City, State): Address: City: State: Zip:				PARAMETER ANALYSIS & METHOD				REMARKS															
Sample ID	Collection Date	Time	Type (✓)		Matrix	Preservative	Filtered (✓)	B	C	C	C	C	C	C	C	C	C						
			Comp	Grab																			
TB050714	5/7/14	0830	✓		W	✓																	
FB050714	5/7/14	0840	✓		W	✓																	
MW-1GF	5/7/14	0941	✓		W	✓																	
MW-2GF	5/7/14	1100	✓		W	✓																	
GM-15S	5/7/14	1223	✓		W	✓																	
PLT2 MW-05	5/7/14	1612	✓		W	✓																	
PLT2 MW-06	5/7/14	1652	✓		W	✓																	
Special Instructions/Comments: Ouz 2 Hydro <input type="checkbox"/> Special QA/QC instructions (✓): Note: Dissolved Sample Filtered with 0.45 micron fluid filter																							
Laboratory Information and Receipt Lab Name: ALS Env <input type="checkbox"/> Cooler packed with ice (✓) Specify Turnaround Requirements: standard Shipping Tracking #:				Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Sample Receipt: Condition/Cooler Temp:				Relinquished By Printed Name: Pat Perzardi Signature: <i>[Signature]</i> Firm/Courier: ARCADIS Date/Time: 5/7/14 1900				Received By Printed Name: Signature: Firm/Courier: Date/Time:				Relinquished By Printed Name: Signature: Firm/Courier: Date/Time:				Laboratory Received By Printed Name: Signature: Firm: Date/Time:			

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#: _____

Lab Work Order # _____

<p>Contact & Company Name: Some Des ARCADIS Address: 2 Hunt of the Quad State 1510 City: Melville NY 11747 State: NY Zip: 11747</p> <p>Telephone: 631-391-5247 Fax: 631-249-7610</p> <p>E-mail Address: Some Des arcadis-usa.com</p> <p>Project #: NY00196.0914.GM12 Sampler's Printed Name: Vincent S. Schwartz Sampler's Signature: <i>V. Schwartz</i></p>	<p>Preservative Filtered (✓) No</p> <p># of Containers 3</p> <p>Container Information 1</p>	<p>PARAMETER ANALYSIS & METHOD</p>	<p>Collection Date 5/9/14 0900 5/9/14 1135 5/9/14 1300 5/9/14 1420 5/9/14 1605</p>	<p>Type (✓) Comp Grab</p>	<p>Matrix W W W W W</p>	<p>REMARKS</p> <p>OU2 Hydro</p>
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<p>Special Instructions/Comments: OU2 Hydro</p>	<p><input type="checkbox"/> Special QA/QC Instructions (✓):</p>	<p>Received By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	<p>Relinquished By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>
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<p>Lab Name: ALS ENV</p> <p><input type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements: Standard</p> <p>Shipping Tracking #:</p>	<p>Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact</p> <p>Sample Receipt: Condition/Cooler Temp: _____</p>	<p>Received By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	<p>Relinquished By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>
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<p>Keys</p> <p>Preservation Key: A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____</p> <p>Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____</p> <p>Matrix Key: SE - Sediment SW - Sludge A - Air SO - Soil W - Water T - Tissue NL - NAPL/Oil SW - Sample Wipe Other: _____</p>	<p>LABORATORY INFORMATION AND RECEIPT</p> <p>Received By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p> <p>Relinquished By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	<p>LABORATORY RECEIVED BY</p> <p>Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____</p>	<p>Distribution: WHITE - Laboratory returns with results YELLOW - Lab copy PINK - Retained by ARCADIS</p>
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ID#: _____

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order # _____

Contact & Company Name: Sona Das ARCADIS Address: 2 Huntington Road, Suite 1510 City: Melville, NY 11747 State: NY Zip: 11747 E-mail Address: Sona.Das@arcadis-us.com Project #: 0061416.0314.6-WMI2 Sampler's Printed Name: Stephen Schwarz	Telephone: 631-249-7600 Fax: 631-249-7610 Project #: 0061416.0314.6-WMI2 Sampler's Signature: Stephen Schwarz	Preservative Filtered (✓) # of Containers Container Information	Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:
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Sample ID	Collection Date	Time	Type (✓)		Matrix	REMARKS
			Comp	Grab		
TB051214	5-12-14	0900	✓	✓	W	PARAMETER ANALYSIS & METHOD MSDEG RSP Method 2005/10/14/13
FB051214	5-12-14	1008	✓	✓	W	
HN-40I	5-12-14	1132	✓	✓	W	
HN-40S	5-12-14	1238	✓	✓	W	
HN-42I	5-12-14	1512	✓	✓	W	
HN-42S	5-12-14	1600	✓	✓	W	

Special Instructions/Comments: OU2 Hydro

Special QA/QC Instructions (✓):

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Lab Name: ALS Environmental	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: Stephen Schwarz	Signature: Stephen Schwarz	Printed Name:	Signature:	Printed Name:	Signature:	Printed Name:	Signature:
<input type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: STD	Firm: ARCADIS	Date/Time: 5-12-14 / 1700	Firm/Courier:	Date/Time:	Firm/Courier:	Date/Time:	Firm:	Date/Time:
Specify Turnaround Requirements:	Condition/Cooler Temp: _____								
Shipping Tracking #:									

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

<p>Contact & Company Name: Soma Das - ARCADIS Address: 2 Hunterton Road, Suite 11510 City: Melville, NY 11747 State: NY Zip: 11747 E-mail Address: Soma.das@arcadis-us.com Project #: NY01496.0314 GMM I2 Sampler's Printed Name: MARGARET S. SCHWARTZ Sampler's Signature: <i>[Signature]</i></p>	<p>Telephone: 631-391-5247 Fax: 631-249-7610 Preservative Filtered (✓): # of Containers: Container Information:</p>	<p>Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____</p> <p>Preservation Key: A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____</p> <p>Matrix Key: SE - Sediment SW - Sample Wipe A - Air SO - Soil W - Water T - Tissue NL - NAPL/Oil SL - Sludge Other: _____</p>
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PARAMETER ANALYSIS & METHOD

Sample ID	Collection		Type (✓)		Matrix	REMARKS
	Date	Time	Comp	Grab		
GM-79 I	5/11/14	1618	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	W	✓
TB051414	5/11/14	1500	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	W	✓
GA-79D	5/11/14	1746	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	W	✓

Special QA/QC Instructions (✓):

OU 2 Hydro

Laboratory Information and Receipt		Received By	Relinquished By	Laboratory Received By
Lab Name: ALS Env	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____	Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____	Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____
<input type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: _____ Condition/Cooler Temp: _____			
Specify Turnaround Requirements: Standard				
Shipping Tracking #: _____				

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Page 1 of 1

ID#:

Contact & Company Name: Soma Das	Telephone: 631-249-7600	Preservative Filtered (✓) # of Containers 3	Container Information MSDET ASD/MS/MSD MSDET ASD/MS/MSD MSDET ASD/MS/MSD
Address: 2 Huntington Blvd, 150 Melville NY 11747	Fax: 631-249-7600	PARAMETER ANALYSIS & METHOD	
City: Melville NY	Zip: 11747	REMARKS	
Project Name/Location (City, State): CWA GW/S N6C Q2	E-mail Address: Soma.das@arcadis-us-15.com		
Sampler's Printed Name: Soma Das	Project #: N1001496.0314.6.W.NE.2	*use for MS/MSD	
Sampler's Signature: <i>Soma Das</i>	Sampler's Signature: <i>Soma Das</i>		
Sample ID	Collection Date		
FB051514	5/15/14 10:00		
TB051514	09:00		
N-10631	11:26		
GM-785	14:58		
GM-781	16:32		

Sample ID	Collection Date	Type (✓)		Matrix	REMARKS
		Comp	Grab		
FB051514	5/15/14 10:00	✓	✓	W	*use for MS/MSD
TB051514	09:00	✓	✓	W	
N-10631	11:26	✓	✓	W	
GM-785	14:58	✓	✓	W	
GM-781	16:32	✓	✓	W	

Special Instructions/Comments:
MS/MSD GM781 / CWA · Hydro / dissolved sample field filtered with 0.45 micron filter

Special QA/QC Instructions (✓):

Received By	Relinquished By	Laboratory Received By
Printed Name:	Printed Name:	Printed Name:
Signature:	Signature:	Signature:
Firm/Courier:	Firm/Courier:	Firm/Courier:
Date/Time:	Date/Time:	Date/Time:

Laboratory Information and Receipt

Lab Name: ALS Environmental Serv

Cooler packed with ice (✓)

Sample Receipt: STD

Specify Turnaround Requirements:

Shipping Tracking #:

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order # _____

Send Results to:	Contact & Company Name: Soma Day - ARCADIS Address: 2 Westinghouse Blvd Suite 1510 City: Melville NY 11747 State: NY Zip: 11747 Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: Soma.day@arcadis-us.com	Project Name/Location (City, State): Westinghouse 002 Embury Project #: NY001496.034, CUM 32 Sampler's Printed Name: V. Schwart Sampler's Signature: <i>[Signature]</i>	Matrix: W
PARAMETER ANALYSIS & METHOD	Preservative Filtered (✓) <input type="checkbox"/> B No C C # of Containers 3 1 1 Container Information 1 3 3	Collection Date Time Type (✓) Comp Grab Matrix TB051614 5/16/14 10:00 ✓ W GM-20 I 5/16/14 10:41 ✓ W GM-20 D 5/16/14 11:30 ✓ W FB051614 5/16/14 11:57 ✓ W PLT1MN-04 5/16/14 12:23 ✓ W	Keys: Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:

Sample ID	Collection Date	Time	Type (✓)		Matrix	REMARKS
			Comp	Grab		
TB051614	5/16/14	10:00	✓		W	Dissolved Cr Total Cr MET USES PRESERVATIVE 2005/1/14/14
GM-20 I	5/16/14	10:41	✓		W	
GM-20 D	5/16/14	11:30	✓		W	
FB051614	5/16/14	11:57	✓		W	
PLT1MN-04	5/16/14	12:23	✓		W	
Special Instructions/Comments: <input type="checkbox"/> Special QA/QC Instructions(✓): 002 Hydro Dissolved Cr Sample Field filtered with 0.45 micron Quirt Filter						

Lab Name: ALS ENV	Relinquished By: Pat Prezosta	Received By:	Laboratory Received By:
<input type="checkbox"/> Cooler packed with ice (✓)	Printed Name: Pat Prezosta	Printed Name:	Printed Name:
Specify Turnaround Requirements: Standard	Signature: <i>[Signature]</i>	Signature:	Signature:
Shipping Tracking #:	Firm: ARCADIS	Firm/Courier:	Firm:
	Date/Time: 5/16/14/1400	Date/Time:	Date/Time:



CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

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Contact & Company Name: Soma Das/Arcadis		Telephone: 631-391-5247		
Address: 2 Huntington Quadrangle Melville, NY		Fax: 631-274-7610		
City: Melville, NY	State: NY	Zip: 11747	E-mail Address: soma.das@arcadis.us	
Project Name/Location (City, State): NYS 042 Bethesda		Project #: NY 0496-0314 GMM12		
Sampler's Printed Name: Paula Miranda		Sampler's Signature: [Signature]		
Sample ID: TB051914 FB051914 REPO51914 HN-24 I FW-03 GM-18 I	Collection Date: 05/14/09 05/14/10 05/14/11 5/19/11 5/19/11 5/19/11	Time: 0930 1000 1235 1400 1604	Type (✓): Comp Grab	Matrix: W W W W W W

PARAMETER ANALYSIS & METHOD

Preservative Filtered (✓)	# of Containers	Container Information	Matrix	Type (✓)	Comp	Grab	Matrix	REMARKS
	3		W	✓			W	
	1		W	✓			W	
			W	✓			W	
			W	✓			W	
			W	✓			W	
			W	✓			W	
			W	✓			W	
			W	✓			W	
			W	✓			W	

Special Instructions/Comments: Special QA/QC Instructions (✓):

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Lab Name: ALS Environmental	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: Paula Miranda	Signature: [Signature]	Printed Name: [Signature]	Signature: [Signature]	Printed Name: [Signature]	Signature: [Signature]	Printed Name: [Signature]	Signature: [Signature]
<input type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: Condition/Cooler Temp: _____	Firm: ARCADIS	Date/Time: 05/19/14 1730	Firm/Courier:	Date/Time:	Firm/Courier:	Date/Time:	Firm:	Date/Time:
Specify Turnaround Requirements: STANDARD		Shipping Tracking #:		Date/Time:		Date/Time:		Date/Time:	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#: _____

Lab Work Order # _____

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<p>Send Results to:</p> <p>Contact & Company Name: Soma Das / ARCADIS Address: 2 Huntington Quadrangle Suite 1510 City: Melville, NY 11747 State: NY Zip: 11747 Email Address: Soma.das@arcadis-us.com Project #: 1100196.0514.NY12 Sampler's Printed Name: Karla Miranda / Parent Sampler's Signature: <i>[Signature]</i></p>	<p>Telephone: 631-391-5247 Fax: 631-249-7610</p>	<p>Preservative Filtered (✓) <u>8</u></p> <p># of Containers <u>3</u></p> <p>Container Information <u>1</u></p>	<p>PARAMETER ANALYSIS & METHOD</p> <p><i>MSDC ASP Method 205</i></p>
<p>Sample ID</p> <p>TR052714 TT-101D TT-101D1 TT-101D2</p>	<p>Collection</p> <p>Date Time</p> <p>05/27/14 1200 05/27/14 1326 05/27/14 1608 05/27/14 1447</p>	<p>Type (✓)</p> <p>Comp Grab</p> <p>✓ ✓ ✓ ✓</p>	<p>Matrix</p> <p>W W W W</p>
<p>REMARKS</p> <p><i>012 Hydro ; 2nd str GW Sampling</i></p>			
<p>Special Instructions/Comments: <input type="checkbox"/> Special QA/QC Instructions (✓):</p>			
<p>Laboratory Information and Receipt</p> <p>Lab Name: <u>ALS Environmental</u></p> <p><input checked="" type="checkbox"/> Cooler packed with ice (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact</p> <p>Specify Turnaround Requirements: <u>STANDARD</u></p> <p>Shipping Tracking #: _____</p>		<p>Received By</p> <p>Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	
<p>Reinquired By</p> <p>Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>		<p>Laboratory Received By</p> <p>Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____</p>	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order # _____

<p>Contact & Company Name: Soma Das / ARCADIS Address: 21 Huntington Quadrangle, Suite 1510 City: Melville, NY 11747 State: NY Zip: 11747 E-mail Address: soma.das@arcadis-us.com Project #: NGE-042-2104-040/Bethpage, NY Sampler's Printed Name: Karla Miranda, P.E. / pat.przeoriski</p>	<p>Telephone: 031-391-5247 Fax: 631-249-7610</p>	<p>Preservative Filtered (✓): B # of Containers: 10 Container Information: 3</p>	<p>Keys: Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Ercon 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____</p> <p>Preservation Key: A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____</p> <p>Matrix Key: SE - Sediment SL - Sludge A - Air SO - Soil W - Water T - Tissue NL - NAPL/Oil SW - Sample Wipe Other: _____</p>
PARAMETER ANALYSIS & METHOD			
Sample ID	Collection Date	Type (✓) Comp. Grab	Matrix
TB052914	5/29/14 0900	✓	W
TT-102 D1	05/29/14 1046	✓	W
TT-102 D2	05/29/14 1206	✓	W
<p>REMARKS: Use method as per attached copy Use method as per attached copy</p>			
<p>Special Instructions/Comments: <input type="checkbox"/> Special QA/QC Instructions (✓): 002 Hydro</p>			
Laboratory Information and Receipt		Relinquished By	
Lab Name: ALS Environmental	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: Karla Miranda	Printed Name: _____
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: Condition/Cooler Temp: _____	Signature: Karla Miranda	Signature: _____
Specify Turnaround Requirements: 2 Weeks TAT		Firm: ARCADIS	Firm/Courier: _____
Shipping Tracking #: _____		Date/Time: 05/29/14 1430	Date/Time: _____
		Laboratory Received By	
		Printed Name: _____	Printed Name: _____
		Signature: _____	Signature: _____
		Firm/Courier: _____	Firm: _____
		Date/Time: _____	Date/Time: _____

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order #

<p>Contact & Company Name: Soma Das / ARCADIS Address: 2 Huntington Quadrangle, Suite 1500 City: Melville, NY 11747 State: NY Zip: 11747 E-mail Address: soma.das@arcadis-us.com Project #: 1001496.0314.6WH12 Sampler's Printed Name: Karla Kinoshita / Pat Probst Sampler's Signature: <i>[Signature]</i></p>	<p>Telephone: 631-391-5247 Fax: 631-294-7610</p>	<p>Preservative Filtered (✓): B-3</p>	<p># of Containers: 3</p>	<p>Container Information: 1</p>	<p style="text-align: center;">PARAMETER ANALYSIS & METHOD</p>	<p>Matrix: W</p>
<p>Sample ID: T B053014 F B053014 MW-3-1</p>	<p>Collection Date: 05/30/14 05/30/14 05/30/14</p>	<p>Type (✓): Comp: <input checked="" type="checkbox"/> <input type="checkbox"/> Grab: <input checked="" type="checkbox"/> <input type="checkbox"/></p>	<p>Matrix: W W W</p>	<p>REMARKS:</p>	<p>Special Instructions/Comments: "YOU2 HYDRO"</p>	
<p>Keys: Preservation Key: A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: G. Other: H. Other: Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other: Matrix Key: SE - Sediment SW - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other:</p>						

Special QA/QC Instructions (✓):
 Laboratory Information and Receipt
 Relinquished By
 Received By
 Relinquished By
 Laboratory Received By

Lab Name: ALS Environmental
 Cooler packed with ice (✓)
 Specify Turnaround Requirements: STANDARD
 Shipping Tracking #:

Relinquished By: Patricia Probst
 Printed Name: Patricia Probst
 Signature: *[Signature]*
 Firm: ARCADIS
 Date/Time: 05/30/14; 1930

Received By:
 Printed Name:
 Signature:
 Firm/Courier:
 Date/Time:

Relinquished By:
 Printed Name:
 Signature:
 Firm/Courier:
 Date/Time:

Laboratory Received By:
 Printed Name:
 Signature:
 Firm:
 Date/Time:

Cooler Custody Seal (✓):
 Intact Not Intact
Sample Receipt:
 Condition/Cooler Temp:

Distribution:
 WHITE - Laboratory returns with results
 YELLOW - Lab copy
 PINK - Retained by ARCADIS

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order # _____

ID#: _____

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<p>Send Results to:</p> <p>Contact & Company Name: <u>Soma Das / Arcadis</u> Address: <u>2 Huntington Quadrangle</u> <u>Suite 1500</u> City: <u>Melville</u> State: <u>NY</u> Zip: <u>11747</u> E-mail Address: <u>Soma.das@arcadis-us.com</u></p> <p>Project Name/Location (City, State): <u>ARC002 INDUSTR / Buffalo, NY</u> Project #: <u>NY001496.0314.6MM2</u> Sampler's Printed Name: <u>Pat prazicki</u> Sampler's Signature: <i>[Signature]</i></p>	<p>Telephone: <u>631-391-6247</u> Fax: <u>631-294-7680</u></p>	<p>Preservative Filtered (✓) _____ # of Containers _____ Container Information _____</p>	<p>PARAMETER ANALYSIS & METHOD</p>	<p>Keys</p> <p>Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____</p> <p>Preservation Key: A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____</p> <p>Matrix Key: SO - Soil W - Water T - Tissue SE - Sediment SL - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other: _____</p>	<p>REMARKS</p>		
<p>Sample ID</p> <p><u>TB060214</u> <u>FB060214</u> <u>GM-75D2</u> <u>N-10627</u> <u>N-10624</u> <u>GM-215</u> <u>REP060214</u></p>		<p>Collection Date Time</p> <p><u>060214 0900</u> <u>060214 0930</u> <u>060214 1156</u> <u>060214 1340</u> <u>060214 1524</u> <u>060214 1632</u> <u>060214 1156</u></p>		<p>Type (✓) Comp Grab</p> <p><u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u></p>		<p>Matrix</p> <p><u>W</u> <u>W</u> <u>W</u> <u>W</u> <u>W</u> <u>W</u> <u>W</u></p>	
<p>Special Instructions/Comments:</p> <p style="font-size: 2em; color: red;">"002 HYDRO"</p> <p><input type="checkbox"/> Special QA/QC Instructions (✓):</p>							
<p>Laboratory Information and Receipt</p> <p>Lab Name: <u>ALS Environmental</u> <input type="checkbox"/> Cooler packed with ice (✓) Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Sample Receipt: Condition/Cooler Temp: _____</p>		<p>Relinquished By</p> <p>Printed Name: <u>Karla Miranda</u> Signature: <i>[Signature]</i> Firm/Courier: <u>ARCADIS</u> Date/Time: <u>0602/14: 1900</u></p>		<p>Received By</p> <p>Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>		<p>Relinquished By</p> <p>Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____</p>	
<p>Shipping Tracking #: <u>STANDARD</u></p>		<p>Laboratory Received By</p> <p>Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____</p>		<p>Distribution:</p> <p>WHITE - Laboratory returns with results YELLOW - Lab copy PINK - Retained by ARCADIS</p>			

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

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Contact & Company Name: Soma Das - ARCADIS Address: 2 Hunterton Quad, Suite 1510 City: Melville NY 11717 State: NY Zip: 11717 Project Name/Location (City, State): Soma.das@arcadis-us.com Project #: NY01196.09N.GMA12 Sampler's Printed Name: Pat Perozzi Sampler's Signature: <i>[Signature]</i>		Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address:		Preservative Filtered (✓) B NO		Container Information # of Containers: 3 Container Information: 1	
Send Results to: Soma Das - ARCADIS 2 Hunterton Quad, Suite 1510 Melville NY 11717 State: NY Zip: 11717		Project Name/Location (City, State): Soma.das@arcadis-us.com Project #: NY01196.09N.GMA12		Matrix Key: SE - Sediment SW - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other:		Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:	
Sample ID TB060314 GM-21D GA-21I		Collection Date 6/9/14 6/9/14 6/9/14		Time 1600 1622 1732		Type (✓) Comp Grab ✓ ✓ ✓	
Matrix W W W		REMARKS T2L VOCs MS&L PGM's 2005/05/14					
Special Instructions/Comments: Ouzo Hydro <input type="checkbox"/> Special QA/QC Instructions (✓):							
Laboratory Information and Receipt Lab Name: ALS ENV <input type="checkbox"/> Cooler packed with ice (✓) Specify Turnaround Requirements: Standard Shipping Tracking #:		Received By Printed Name: Signature: Firm/Courier: Date/Time:		Relinquished By Printed Name: Signature: Firm/Courier: Date/Time:		Laboratory Received By Printed Name: Signature: Firm: Date/Time:	
Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Sample Receipt: Condition/Cooler Temp:		Printed Name: Pat Perozzi Signature: <i>[Signature]</i> Firm: ARCADIS Date/Time: 6/9/14 1845		Printed Name: Signature: Firm/Courier: Date/Time:		Printed Name: Signature: Firm: Date/Time:	

Contact & Company Name: Soma Das / ARCADIS		Telephone: 631-391-5247	
Address: 2 Huntington Quadrangle Suite 1510		Fax: 631-249-7610	
City: Melville NY 11747	State: NY	Zip: 11747	E-mail Address: Soma.das@arcadis-us.com
Project Name/Location (City, State): MVC 0221012/Bethpage NY 061496.0314.91WMI2			
Sampler's Printed Name: Karlo Miranda			
Sampler's Signature: <i>Karlo Miranda</i>			

Sample ID	Collection		Type (✓)		Matrix
	Date	Time	Comp	Grab	
TB060414	060414	1030	<input checked="" type="checkbox"/>		W
GM-15D2	060414	1152	<input checked="" type="checkbox"/>		W
GM-15I	060414	1339	<input checked="" type="checkbox"/>		W
GM-15D	060414	1551	<input checked="" type="checkbox"/>		W

*MS/MSD

Special Instructions/Comments:
"OU2 HYDRO"
* please use "GM-15D2" as MS/MSD OA/QC.

Special QA/QC Instructions (✓):

Laboratory Information and Receipt		Received By		Relinquished By		Laboratory Received By	
Lab Name: ALS Environmental	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: Karlo Miranda	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: STANDARD	Signature: <i>Karlo Miranda</i>	Signature:	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: STANDARD	Condition/Cooler Temp: _____	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm:	Firm:
Shipping Tracking #:		Date/Time: 06/04/14 1715	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

<p>Contact & Company Name: Soma Das/ARCADIS Address: 2 Huntington Quadrangle, Suite 1512 City: Melville, NY 11747 State: NY Zip: 11747 E-mail Address: soma.das@arcadis-us.com Telephone: 631-391-5247 Fax: 631-249-7610</p>	<p>Project Name/Location (City, State): MAG 002 30 km/Bellport, NY Project #: NY 001446-214T NAVI 2 <i>for information of pot projects</i> Sampler's Printed Name: Karla Miranda/Boyd Sampler's Signature: <i>[Signature]</i></p>	<p>Preservative Filtered (✓) # of Containers Container Information</p>	<p>Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other: Matrix Key: SE - Sediment NL - NAP/JOI SW - Sludge SW - Sample Wipe A - Air Other: Preservation Key: A. H₂SO₄ B. HCl C. HNO₃ D. NaOH E. None F. Other: G. Other: H. Other: REMARKS</p>	
PARAMETER ANALYSIS & METHOD				
Sample ID	Collection Date	Time	Type (✓) Comp Grab	Matrix
TB080614KMI	08/06/14	1100	✓	W
Bpow1-3	08/06/14	1326	✓	W
Bpow1-2	08/06/14	1545	✓	W
<p style="text-align: center;">VOCs US EPA Method 824.2</p>				
<p>Special Instructions/Comments: OU2 HYDRO <input type="checkbox"/> Special QA/QC Instructions(✓):</p>				
Laboratory Information and Receipt		Relinquished By		
Lab Name: ALS Environmental	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: Karla Miranda	Printed Name:	Printed Name:
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: STANDARD TAT	Signature: <i>[Signature]</i>	Signature:	Signature:
Specify Turnaround Requirements:	Condition/Cooler Temp: _____	Firm: ARCADIS	Firm/Courier:	Firm:
Shipping Tracking #:		Date/Time: 08/06/14, 1730	Date/Time:	Date/Time:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

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<p>Contact & Company Name: <u>Soma Das/Arcadis</u> Address: <u>240 Livingston Quadrangle Suite 1510</u> City: <u>Madville NY 11747</u> State: <u>NY</u> Zip: <u>14854</u> Telephone: <u>631-391-5247</u> Fax: <u>631-249-7610</u> E-mail Address: <u>Soma.das@arcadis-us.com</u></p>		<p>Project #: _____ Sampler's Printed Name: <u>Karla Miranda</u> Sampler's Signature: <u>[Signature]</u></p>		<p>Preservative Filtered (✓) _____</p>	<p># of Containers _____</p>	<p>Container Information _____</p>	<p>Matrix Key: SE - Sediment NL - NAP/LOI SL - Sludge SW - Sample Wipe A - Air Other: _____</p>	
<p>Send Results to:</p>		<p>Project Name/Location (City, State): <u>NSC 002 306 w/ Betty pgs. NY NY001496.3141. NAVAJ2</u></p>		<p>Container Information _____</p>	<p>Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____</p>	<p>Matrix Key: SO - Soil W - Water T - Tissue SE - Sediment NL - NAP/LOI SL - Sludge SW - Sample Wipe A - Air Other: _____</p>	<p>REMARKS</p>	
<p>Sample ID</p>		<p>Collection Date</p>	<p>Time</p>	<p>Type (✓)</p>	<p>Comp</p>	<p>Grab</p>	<p>Matrix</p>	
<p><u>TB080814 KM1</u></p>		<p><u>080814</u></p>	<p><u>1040</u></p>	<p><input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	<p><u>W</u></p>	
<p><u>Bpow 2-3</u></p>		<p><u>080814</u></p>	<p><u>1347</u></p>	<p><input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	<p><u>W</u></p>	
<p><u>Bpow 3-1</u></p>		<p><u>080814</u></p>	<p><u>1713</u></p>	<p><input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	<p><u>W</u></p>	
<p align="center"> <input type="checkbox"/> Special QA/QC Instructions (✓): <u>"002 HYDRO"</u> </p>								
<p>Lab Name: <u>ALS Environmental</u></p>		<p>Cooler Custody Seal (✓) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact</p>		<p>Printed Name: <u>Karla Miranda</u></p>	<p>Signature: <u>[Signature]</u></p>	<p>Firm/Courier: <u>Arcadis</u></p>	<p>Date/Time: <u>08/08/14 1800</u></p>	
<p>Shipping Tracking #: <u>STANDARD T.A.T.</u></p>		<p>Sample Receipt: Condition/Cooler Temp: _____</p>		<p>Printed Name: _____</p>	<p>Signature: _____</p>	<p>Firm/Courier: _____</p>	<p>Date/Time: _____</p>	
<p>Specify Turnaround Requirements: <u>STANDARD T.A.T.</u></p>		<p>Cooler packed with ice (✓) <input checked="" type="checkbox"/></p>		<p>Printed Name: _____</p>	<p>Signature: _____</p>	<p>Firm/Courier: _____</p>	<p>Date/Time: _____</p>	
<p>Shipping Tracking #: _____</p>		<p>Condition/Cooler Temp: _____</p>		<p>Printed Name: _____</p>	<p>Signature: _____</p>	<p>Firm/Courier: _____</p>	<p>Date/Time: _____</p>	
<p>WHITE - Laboratory returns with results</p>				<p>YELLOW - Lab copy</p>				<p>PINK - Retained by ARCADIS</p>

Bpow 3-1
 Sample time
 1713



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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order #

Contact & Company Name: Somadas / Arcadis Address: 311 Livingston Ave. Quadrange Suite 1510 Melville, NY 11747 State: NY Zip: 11747 Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: soma.dase@arcadis-us.com		Project Name/Location (City, State): NGE 002 306W / Bellpage, NY Sampler's Printed Name: Pat Provenzi / Karla Miranda	
Project #: N100496314T-000012 Sampler's Signature: <i>[Signature]</i>		Matrix: W	

Sample ID	Collection		Type (✓)		Matrix	Preservative Filled (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD	REMARKS
	Date	Time	Comp	Grab						
TB081114-KM1	08/11/14	1115	-	-	W	✓				
FB081114-KM1	08/11/14	1122	-	-	W	✓				
BPOW 2-2	08/11/14	1312	✓	-	W	✓				
BPOW 2-1	08/11/14	1609	✓	-	W	✓				

Special Instructions/Comments: "OU2 HYDRO"

Special QA/QC Instructions (✓):

Laboratory Information and Receipt Lab Name: ALS Environmental <input type="checkbox"/> Cooler packed with ice (✓) Specify Turnaround Requirements: STANDARD T.A.T. Shipping Tracking #:		Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Sample Receipt: Condition/Cooler Temp:		Relinquished By Printed Name: Karla Miranda Signature: <i>[Signature]</i> Firm/Courier: ARCADIS Date/Time: 08/11/14 1800		Received By Printed Name: <i>[Blank]</i> Signature: <i>[Blank]</i> Firm/Courier: <i>[Blank]</i> Date/Time: <i>[Blank]</i>		Relinquished By Printed Name: <i>[Blank]</i> Signature: <i>[Blank]</i> Firm/Courier: <i>[Blank]</i> Date/Time: <i>[Blank]</i>		Laboratory Received By Printed Name: <i>[Blank]</i> Signature: <i>[Blank]</i> Firm: <i>[Blank]</i> Date/Time: <i>[Blank]</i>	
--	--	---	--	--	--	---	--	---	--	--	--

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Contact & Company Name: Address: <i>Some Des - ARCADIS</i> City: <i>Huntington Wood 1510</i> State: <i>NY</i> Zip: <i>11747</i> Telephone: <i>631-391-5247</i> Fax: <i>631-249-7610</i> E-mail Address: <i>Some.Des@Arcadis-us.com</i>			Project #: Sampler's Printed Name: Signature: <i>Karla Hernandez</i>			Keys Preservation Key: A. H ₂ SO ₄ B. HCl C. HNO ₃ D. NaOH E. None F. Other: G. Other: H. Other: Matrix Key: SO - Soil W - Water T - Tissue SE - Sediment SL - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other:		
Send Results to: City: <i>Huntington Wood 1510</i> State: <i>NY</i> Zip: <i>11747</i> Project #: Sampler's Printed Name: Signature: <i>Karla Hernandez</i>			Container Information Preservative Filled (✓) # of Containers Container Information			PARAMETERS ANALYSIS & METHOD (This area contains handwritten notes and a grid for analysis parameters)		
Sample ID Date Time Collection Type (✓) Comp Grab Matrix			Remarks (This area contains handwritten notes such as 'Please use as QA/QC sample')			Special Instructions/Comments: (This area contains handwritten notes such as 'Ouz Hydro')		

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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<p>Send Results to:</p> <p>Contact & Company Name: Sama Das - ARCADIS Address: 2 Huntington Quad City: Huntington State: NY Zip: 11747</p> <p>Telephone: 631-791- Fax: 631-249-7610 E-mail Address: sama.das@arcadis-usa.com</p> <p>Project Name/Location (City, State): NY 11747 Sampler's Printed Name: Kavita Miranda</p>	<p>Preservative</p> <p>Filtered (✓) <u>0</u></p> <p># of Containers <u>3</u></p> <p>Container Information <u>1</u></p>	<p>PARAMETER ANALYSIS & METHOD</p> <p><i>VOCs that pass 2</i></p>	<p>Keys</p> <p>Container Information Key:</p> <ol style="list-style-type: none"> 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____ <p>Preservation Key:</p> <p>A. H₂SO₄</p> <p>B. HCl</p> <p>C. HNO₃</p> <p>D. NaOH</p> <p>E. None</p> <p>F. Other: _____</p> <p>G. Other: _____</p> <p>H. Other: _____</p> <p>Matrix Key:</p> <p>SE - Sediment NL - NAP/Oil</p> <p>SW - Sludge SW - Sample Wipe</p> <p>A - Air Other: _____</p>
<p>Sample ID</p> <p><u>BROW 3-2</u></p> <p><u>TBO81814KN1</u></p>	<p>Collection</p> <p>Date: <u>08/19/14</u> Time: <u>1342</u></p> <p>Date: <u>08/19/14</u> Time: <u>1200</u></p>	<p>Type (✓)</p> <p>Comp: _____ Grab: _____</p> <p><u>✓</u> <u>✓</u></p> <p><u>✓</u> _____</p>	<p>Matrix</p> <p><u>W</u></p> <p><u>W</u></p>
<p>REMARKS</p>			
<p> </p>			

Special QA/QC Instructions (✓):

OU 2 Hydro

<p>Lab Name: <u>ALS Environmental</u></p> <p><input type="checkbox"/> Cooler packed with ice (✓) <u>Yes</u></p> <p>Specify Turnaround Requirements: <u>Standard</u></p> <p>Shipping Tracking #: _____</p>	<p>Laboratory Information and Receipt</p> <p>Cooler Custody Seal (✓)</p> <p><input type="checkbox"/> Intact <input type="checkbox"/> Not Intact</p> <p>Sample Receipt:</p> <p>Condition/Cooler Temp: _____</p>	<p>Relinquished By</p> <p>Printed Name: <u>Kavita Miranda</u></p> <p>Signature: <u>Kavita Miranda</u></p> <p>Firm: <u>ARCADIS</u></p> <p>Date/Time: <u>8/19/14 1545</u></p>	<p>Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>	<p>Relinquished By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm/Courier: _____</p> <p>Date/Time: _____</p>	<p>Laboratory Received By</p> <p>Printed Name: _____</p> <p>Signature: _____</p> <p>Firm: _____</p> <p>Date/Time: _____</p>
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Infrastructure Water Environment Buildings

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CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Contact & Company Name: Soga Dev - ARCADIS Address: 2 Huntton Ave, Suite 1510 City: Melville NY 11747 State: NY Zip: 11747 Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: SogaDev@arcadis-us.com		Project Name/Location (City, State): NYS 022014 Sampler's Printed Name: Karla Miranda		Project #: NYS01962411.NAVI3 Sampler's Signature: <i>[Signature]</i>		Matrix: W		Type (✓) Comp: ✓ Grab: ✓		Collection Date: 8/20/14 Time: 1530		Matrix: W		Filtered (✓): <input checked="" type="checkbox"/>		Relinquished By: Karla Miranda Printed Name: Karla Miranda Signature: <i>[Signature]</i>		Received By: Printed Name: Signature: Firm/Courier: Date/Time:		Laboratory Received By: Printed Name: Signature: Firm: Date/Time:	
Send Results to:		Sample ID: TB082014 KM 2 BRW 1-6		Date: 8/20/14 Time: 1614		Type (✓) Comp: ✓ Grab: ✓		Collection Date: 8/20/14 Time: 1614		Matrix: W		Filtered (✓): <input checked="" type="checkbox"/>		Relinquished By: Printed Name: Signature: Firm/Courier: Date/Time:		Received By: Printed Name: Signature: Firm/Courier: Date/Time:		Laboratory Received By: Printed Name: Signature: Firm: Date/Time:			
Preservation Key: A. H ₂ SO ₄ B. HCl C. HNO ₃ D. NaOH E. None F. Other: G. Other: H. Other:		Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:		Matrix Key: SE - Sediment SO - Soil W - Water T - Tissue		NL - NAP/Oil SW - Sample Wipe Other:		REMARKS: VCS METHOD USER WITH 2													
Special Instructions/Comments: <input type="checkbox"/> Special QA/QC Instructions (✓): OU 2 Hydro																					
Lab Name: ALS Environmental <input checked="" type="checkbox"/> Cooler packed with ice (✓)		Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Sample Receipt: Condition/Cooler Temp:		Specify Turnaround Requirements: Standard		Shipping Tracking #:		Relinquished By: Karla Miranda Printed Name: Karla Miranda Signature: <i>[Signature]</i>		Received By: Printed Name: Signature: Firm/Courier: Date/Time:		Laboratory Received By: Printed Name: Signature: Firm: Date/Time:							

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

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Contact & Company Name: Soma Das / ARCADIS
Address: 2 Huntington Quadrangle Suite 1510
City: Melville **State:** NY **Zip:** 11747
Telephone: 631-391-5247
Fax: 631-249-7600
E-mail Address: Soma.das@arcadis-us.com

Project Name/Location (City, State): NSG04240 6ml Bethpage NY
Project #: NY NY001496.3147.9MM12
Sampler's Printed Name: Kerk Vandyke
Sampler's Signature: *[Signature]*

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Time	Type (✓)		Matrix	Remarks
			Comp	Grab		
TB101514	10/15/14	1300	✓		W	TCL VOCs Method 8200
6M-39DB	10/15/14	1354	✓		W	
6M-39DA	10/15/14	1404	✓		W	
6M-18D	10/15/14	1615	✓		W	
6M-18I	10/15/14	1649	✓		W	

Keys
Preservation Key:
 A. H₂SO₄
 B. HCL
 C. HNO₃
 D. NaOH
 E. None
 F. Other: _____
 G. Other: _____
 H. Other: _____
Container Information Key:
 1. 40 ml Vial
 2. 1 L Amber
 3. 250 ml Plastic
 4. 500 ml Plastic
 5. Encore
 6. 2 oz. Glass
 7. 4 oz. Glass
 8. 8 oz. Glass
 9. Other: _____
 10. Other: _____
Matrix Key:
 SE - Sediment
 SW - Sample Wipe
 A - Air
 NL - NAPL/Oil
 T - Tissue

Special Instructions/Comments: "OU2 HYDR0" Special QA/QC Instructions (✓):

Laboratory Information and Receipt		Received By		Relinquished By		Laboratory Received By	
Lab Name: <i>Accutest</i>	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: <i>Saba Alvanda</i>	Printed Name: _____	Printed Name: _____	Printed Name: _____	Printed Name: _____	Printed Name: _____
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: <i>STANDARD T.A.T.</i>	Signature: <i>[Signature]</i>	Signature: _____	Signature: _____	Signature: _____	Signature: _____	Signature: _____
Specify Turnaround Requirements: <i>STANDARD T.A.T.</i>	Condition/Cooler Temp: _____	Firm: <i>ARCADIS</i>	Firm/Courier: _____	Firm/Courier: _____	Firm/Courier: _____	Firm/Courier: _____	Firm/Courier: _____
Shipping Tracking #: _____		Date/Time: <i>10/15/14 1845</i>	Date/Time: _____	Date/Time: _____	Date/Time: _____	Date/Time: _____	Date/Time: _____

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Send Results to:	Contact & Company Name: Soma Das / ARCADIS	Telephone: 631-391-5247	Preservative Filtered (✓): B		
	Address: 2 Huntington Quadrangle Suite 1510	Fax: 631-249-7600	# of Containers: 2		
	City: Melville NY 11747	E-mail Address: Soma.das@arcadis-us.com	Container Information: 1		
	Project Name/Location (City, State): ARCADIS/2016/ Bethpage NY NY001496.3147.9MM12	Project #: NY001496.3147.9MM12	PARAMETER ANALYSIS & METHOD		
	Sampler's Printed Name: Karla Kluanda / Pat Probst	Sampler's Signature: <i>[Signature]</i>	REMARKS		
	Sample ID	Collection Date	Type (✓) Comp	Grab	Matrix
	TB101514 KM1	10/15/14 1300	<input checked="" type="checkbox"/>		W
	GM-39DB	10/15/14 1354	<input checked="" type="checkbox"/>		W
	GM-39DA	10/15/14 1404	<input checked="" type="checkbox"/>		W
	GM-18D	10/15/14 1615	<input checked="" type="checkbox"/>		W
	GM-18T	10/15/14 1649	<input checked="" type="checkbox"/>		W

Sample ID	Collection Date	Type (✓) Comp	Grab	Matrix	Remarks
TB101514 KM1	10/15/14 1300	<input checked="" type="checkbox"/>		W	
GM-39DB	10/15/14 1354	<input checked="" type="checkbox"/>		W	
GM-39DA	10/15/14 1404	<input checked="" type="checkbox"/>		W	
GM-18D	10/15/14 1615	<input checked="" type="checkbox"/>		W	
GM-18T	10/15/14 1649	<input checked="" type="checkbox"/>		W	

Special Instructions/Comments: "OUZ HYDRD" Special QA/QC Instructions (✓):

Laboratory Information and Receipt		Received By		Relinquished By		Laboratory Received By	
Lab Name: Accutest	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: Karla Kluanda	Signature: <i>[Signature]</i>	Printed Name: Pat Probst	Signature: <i>[Signature]</i>	Printed Name:	Signature:
Specify Turnaround Requirements: STANDARD T.A.T.	Sample Receipt: Condition/Cooler Temp: _____	Firm: ARCADIS	Firm/Courier: ARCADIS	Firm/Courier:	Firm/Courier:	Printed Name:	Signature:
Shipping Tracking #:		Date/Time: 10/15/14 1845	Date/Time:	Date/Time:	Date/Time:	Printed Name:	Signature:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

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Contact & Company Name: Soma Das 2 Huntington Quadrangle Suite 1510 Mdville NY 11747 Soma.das@arcadis-us.com	Telephone: 631-391-5247	City: Mdville NY	State: NY	Zip: 11747
Project Name/Location (City, State): NGC02 49 SW/Bedpage, NY	Fax: 631-249-7610	E-mail Address: Soma.das@arcadis-us.com		
Sampler's Printed Name: Kerla Miranda / K. Voigt	Project #: NY000496.314I.6WMI2	Sampler's Signature: <i>[Signature]</i>		

Sample ID	Collection		Type (✓)		Matrix
	Date	Time	Comp	Grab	
TB101614 km1	10/16/14	1140	✓	✓	W
FB101614 km1	10/16/14	1240	✓	✓	W
REP101614 km1	10/16/14	---	✓	✓	W
GM-34D	10/16/14	1204	✓	✓	W
GM-34D2	10/16/14	1245	✓	✓	W
PLTMW-4	10/16/14	1531	✓	✓	W
PLTMW-5	10/16/14	1653	✓	✓	W
PLTMW-6	10/16/14	1617	✓	✓	W
MW-1GF	10/16/14	1838	✓	✓	W

Special Instructions/Comments:
OU2 HYDRO
* Special QA/QC Instructions (✓):
* Please use "PLTMW-5" sample for MS/MSD (Q/RC)

Lab Name: Accutest	Relinquished By: Printed Name: <i>[Signature]</i>	Received By: Printed Name: <i>[Signature]</i>	Laboratory Received By: Printed Name: _____
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	Signature: _____	Signature: _____	Signature: _____
Specify Turnaround Requirements: STANDARD T.A.T.	Firm/Courier: ARCADIS	Firm/Courier: <i>[Signature]</i>	Firm: _____
Shipping Tracking #:	Date/Time: 10/16/14, 2000	Date/Time: 10/17/14 10:00	Date/Time: _____



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Contact & Company Name: Soma Das
Address: 3 Huntington Production Site 1580
City: Medville **State:** NY **Zip:** 11747
Telephone: 631-391-5247
Fax: 631-249-7610
E-mail Address: soma.das@arcadis-us.com
Project Name/Location (City, State): NYC 002 40 SW/Bathpage, NY
Project #: NY01496.314I.GWHJ2
Sampler's Printed Name: Karla Arias / K. Arias
Sampler's Signature: [Signature]

Sample ID	Collection		Type (✓)		Matrix	Remarks
	Date	Time	Comp	Grab		
TB101614 Km1	10/16/14	1140	✓		W	
FB101614 Km1	10/16/14	1240	✓		W	
REP101614 Km1	10/16/14		✓		W	
GM-34D	10/16/14	1204	✓		W	
GM-34D2	10/16/14	1245	✓		W	
PLTMW-4	10/16/14	1531	✓		W	* MS/MSD
PLTMW-5	10/16/14	1653	✓		W	
PLTMW-6	10/16/14	1617	✓		W	
MW-1GF	10/16/14	1838	✓		W	

Special Instructions/Comments: OU2 HYDRO

Special QA/QC Instructions (✓):
 Please use "PLTMW-5" sample for MS/MSD QA/QC.

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By	
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Signature:	Printed Name:	Signature:	Printed Name:	Signature:
Accutest	<input type="checkbox"/> Intact <input checked="" type="checkbox"/> Not Intact	Raf Proziński	[Signature]	[Signature]	[Signature]	[Signature]	[Signature]
<input type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt:	Firm:	Firm/Courier:	Firm:	Firm/Courier:	Firm:	Firm/Courier:
Specify Turnaround Requirements: STANDARD T.A.T.	Condition/Cooler Temp: _____	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS
Shipping Tracking #:		Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:
		10/16/14 2000	10/17/14 12:00	10/17/14 12:00	10/17/14 12:00	10/17/14 12:00	10/17/14 12:00

ID#: _____

Contact & Company Name: Soma Das / ARCADIS Telephone: 631-391-5247 Address: 2 Huntington Quadrangle Suite 1510 Fax: 631-249-7610 City: Melville, NY 11747 State: NY Zip: _____ E-mail Address: soma.das@arcadis-us.com		Project Name/Location (City, State): NYC 0240 6th/Bethpage NY	
Project #: NY001976.314I.GWMI2		Sample's Printed Name: Kavitha Khanda / Kart Vargha	
Sample's Signature: [Signature]		Matrix: W	

Sample ID	Collection		Type (✓)		Matrix	REMARKS
	Date	Time	Comp	Grab		
TB101714KM1	10/17/14	0910	✓	✓	W	PARAMETER ANALYSIS & METHOD TCL VCS Method 8260C Method 8260C
6M-73D	10/17/14	1123	✓	✓	W	
6M-73D2	10/17/14	0952	✓	✓	W	
6M-74I	10/17/14	0957	✓	✓	W	
6M-74D	10/17/14	1127	✓	✓	W	
6M-74D2	10/17/14	1258	✓	✓	W	

Special Instructions/Comments: Special QA/QC Instructions (✓):

Lab Name: Accutest		Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Cooler Custody Seal (✓)		<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Printed Name: Kavitha Khanda		Printed Name: KAS		Printed Name: _____		Printed Name: _____	
<input checked="" type="checkbox"/> Cooler packed with ice (✓)		Sample Receipt:		Signature: [Signature]		Signature: [Signature]		Signature: _____		Signature: _____	
Specify Turnaround Requirements: STANDARD T.A.T.		Condition/Cooler Temp: _____		Firm: ARCADIS		Firm/Counter: [Signature]		Firm/Counter: _____		Firm: _____	
Shipping Tracking #: _____		Date/Time: 10/17/14 ; 1540		Date/Time: 10/17/14		Date/Time: 10/17/14 16:20		Date/Time: _____		Date/Time: _____	

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<p>Contact & Company Name: Soma Das / ARCADIS</p> <p>Address: 2 Huntington Quadrangle Suite 1510</p> <p>City: Melville NY 11747</p> <p>Project Name/Location (City, State): NYC 01249 6th/Bethpage NY</p> <p>Address: 2 Huntington Quadrangle Suite 1510</p> <p>City: Melville NY 11747</p> <p>Project #: NY001496.314I.gwMI2</p> <p>Sampler's Printed Name: Dario Miranda / Kirk Varago</p> <p>Sampler's Signature: <i>[Signature]</i></p>	<p>Telephone: 631-391-5247</p> <p>Fax: 631-249-7610</p> <p>E-mail Address: Soma.das@arcadis-us.com</p> <p>Project #: NY001496.314I.gwMI2</p> <p>Sampler's Signature: <i>[Signature]</i></p>	<p>Preservative Filtered (✓) B</p> <p># of Containers 2</p> <p>Container Information 1</p>	<p>Matrix W</p>	<p>Collection Date 10/17/14</p> <p>Time 0910</p> <p>Type (✓) Comp</p>	<p>Grab ✓</p>	<p>Matrix W</p>	<p>PARAMETER ANALYSIS & METHOD</p> <p>TCL VOCs Method 8260 TCL VOCs Method 8260</p>
<p>Sample ID</p>							
<p>TB101714KM1</p>							
<p>6M-73D</p>							
<p>6M-73D2</p>							
<p>6M-74I</p>							
<p>6M-74D</p>							
<p>6M-74D2</p>							
<p>REMARKS</p>							
<p><input type="checkbox"/> Special QA/QC Instructions(✓):</p>							

- Preservation Key:**
- A. H₂SO₄
 - B. HCL
 - C. HNO₃
 - D. NaOH
 - E. None
 - F. Other: _____
 - G. Other: _____
 - H. Other: _____
 - 10. Other: _____
- Container Information Key:**
- 1. 40 ml Vial
 - 2. 1 L Amber
 - 3. 250 ml Plastic
 - 4. 500 ml Plastic
 - 5. Encore
 - 6. 2 oz. Glass
 - 7. 4 oz. Glass
 - 8. 8 oz. Glass
 - 9. Other: _____
 - 10. Other: _____
- Matrix Key:**
- SE - Sediment
 - SO - Soil
 - W - Water
 - T - Tissue
 - NL - NAPL/Oil
 - SW - Sample Wipe
 - Other: _____

Lab Name: Arcotest

Cooler packed with ice (✓)

Specify Turnaround Requirements:
STANDARD T.A.T.

Shipping Tracking #:

Laboratory Information and Receipt

Intact Not Intact

Sample Receipt:

Condition/Cooler Temp:

Relinquished By

Printed Name: Kayal Kishore

Signature: *[Signature]*

Firm/Courier: ARCADIS

Date/Time: 10/17/14 1540

Received By

Printed Name: [Signature]

Signature: *[Signature]*

Firm/Courier: [Signature]

Date/Time: 10/17/14 16:20

Relinquished By

Printed Name:

Signature:

Firm:

Date/Time:

Laboratory Received By

Printed Name:

Signature:

Firm:

Date/Time:



Infrastructure Water Environment Buildings

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

ID#: _____ Page 1 of 1

Contact & Company Name: Soma Das / ARCADIS Address: 2 Huntington Quadrangle Suite 1510 City: Melville NY 11747 State: NY Zip: _____ Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: Soma.das@arcadis-us.com		Preservative Filtered (✓) B - C - C - C - C - - - - - 2 3 3 3 3 1 1 3 3 3	
Project Name/Location (City, State): NYC 0240 4th/Boothpage, NY Sampler's Printed Name: Karla Miranda / Kirk Vaigast		Matrix Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____	
Project #: NY001476.3141.9WMI2		Matrix Key: SE - Sediment SL - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other: _____	
Sampler's Signature: 		Preservation Key: A. H ₂ SO ₄ B. HCl C. HNO ₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____	

Sample ID	Collection Date	Time	Type (✓)		Matrix	PARAMETER ANALYSIS & METHOD					REMARKS	
			Comp	Grab		Preservative	Filtered (✓)	# of Containers	Container Information	Matrix Key		
TB102014KM1	10/19/14	1100	✓	✓	W	TCL VOC	Method 8260C	Totals Cd/Cr	Method 6010	Method 6010	Method 6010	
FB102014KM1	10/19/14	1155	✓	✓	W	TCL VOC	Method 8260C	Totals Cd/Cr	Method 6010	Method 6010	Method 6010	
GM-15S	10/19/14	1348	✓	✓	W	TCL VOC	Method 8260C	Totals Cd/Cr	Method 6010	Method 6010	Method 6010	
GM-15I	10/19/14	1216	✓	✓	W	TCL VOC	Method 8260C	Totals Cd/Cr	Method 6010	Method 6010	Method 6010	
GM-15D	10/19/14	1320	✓	✓	W	TCL VOC	Method 8260C	Totals Cd/Cr	Method 6010	Method 6010	Method 6010	
GM-15D2	10/19/14	1145	✓	✓	W	TCL VOC	Method 8260C	Totals Cd/Cr	Method 6010	Method 6010	Method 6010	
MW-26F	10/19/14	1613	✓	✓	W	TCL VOC	Method 8260C	Totals Cd/Cr	Method 6010	Method 6010	Method 6010	

Special Instructions/Comments: Ouz HYDR0

Special QA/QC Instructions (✓):

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Lab Name: Accutest	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: Karla Miranda	Signature:	Printed Name: Chris Land	Signature:	Printed Name: _____	Signature: _____	Printed Name: _____	Signature: _____
<input type="checkbox"/> Cooler packed with ice (✓)	Sample Receipt: STANDARD	Printed Name: Karla Miranda	Signature:	Printed Name: _____	Signature: _____	Printed Name: _____	Signature: _____	Printed Name: _____	Signature: _____
Shipping Tracking #: _____	Condition/Cooler Temp: _____	Firm: ARCADIS	Date/Time: 10/20/14 1830	Firm: _____	Date/Time: 10/21/14 9:15	Firm: _____	Date/Time: _____	Firm: _____	Date/Time: _____

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Page 1 of 1

ID#: _____

Contact & Company Name: Soma Das/ARCADIS	Telephone: 631-391-5247	Preservative Filtered (✓)	Container Information # of Containers: 2 Container Information: 1
Address: 2 Huntington Quadrangle Suite 1510 South 1510	Fax: 631-249-7610	PARAMETER ANALYSIS & METHOD	
City: Melville	State: NY		
E-mail Address: Soma.das@arcadisus.com	Project #: NY014963147.9MM12	REMARKS	
Project Name/Location (City, State): NCC01240 and Bellapease NY	Sampler's Printed Name: Kavaliyanda/Pat Prasanna/Kavaliyanda Prasanna		

Sample ID	Collection		Type (✓)		Matrix	REMARKS
	Date	Time	Comp	Grab		
TB102114KM1	10/21/14	1100	✓	✓	W	
FB102114KM1	10/21/14	1126	✓	✓	W	
REPI02114KM1	10/21/14	—	✓	✓	W	
GM-33D2	10/21/14	1514	✓	✓	W	
GM-75D2	10/21/14	1149	✓	✓	W	
N-10621	10/21/14	1315	✓	✓	W	

Special QA/QC Instructions (✓):
Please use sample 'GM-75D2' for MS/MSD

Note: Dissolved Coler sample field filtered

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By	
Lab Name: Accutest	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: Kavaliyanda	Signature: Kavaliyanda	Printed Name: Chris Leahy	Signature: Chris Leahy	Printed Name:	Signature:
Specify Turnaround Requirements: STANDARD	Sample Receipt: Condition/Cooler Temp: _____	Firm: ARCADIS	Date/Time: 10/20/14 1745	Firm/Courier: Accutest	Date/Time: 10/22/14/950	Printed Name:	Signature:
Shipping Tracking #:						Printed Name:	Signature:
						Printed Name:	Signature:



CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

ID#:

Page 1 of 1

Contact & Company Name: Soma Das / ARCADIS		Telephone: 631-391-5247	
Address: 2 Huntington Quadrangle Suite 1510		Fax: 631-247-7000	
City: McWilliams, NY 11747	State: NY	Zip: 11747	E-mail Address: Soma.das@arcadis.com
Project Name/Location (City, State): NRC 002 400W / Bellport, NY		Project #: NY001496.3147.5W112	
Sampler's Printed Name: Lorela Miranda / Kirk Vargas		Sampler's Signature:	

Sample ID	Collection		Type (✓)		Matrix	REMARKS
	Date	Time	Comp	Grab		
TB102214KM1	10/22/16	0700		✓	W	
GM-35D2	10/22/16	1330		✓	W	
GM-38D	10/22/16	1520		✓	W	
GM-38D2	10/22/16	1630		✓	W	

Keys

Preservation Key:
 A. H₂SO₄
 B. HCL
 C. HNO₃
 D. NaOH
 E. None
 F. Other: _____
 G. Other: _____
 H. Other: _____

Container Information Key:
 1. 40 ml Vial
 2. 1 L Amber
 3. 250 ml Plastic
 4. 500 ml Plastic
 5. Encore
 6. 2 oz. Glass
 7. 4 oz. Glass
 8. 8 oz. Glass
 9. Other: _____
 10. Other: _____

Matrix Key:
 SE - Sediment
 SW - Sludge
 A - Air
 SO - Soil
 W - Water
 T - Tissue
 NL - NAPL/Oil
 SW - Sample Wipe
 Other: _____

PARAMETER ANALYSIS & METHOD

Special Instructions/Comments: D02 HYDRO

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Lab Name: Arcadis		Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Printed Name: Lorela Miranda		Printed Name: Louis Jackson		Printed Name:	
<input type="checkbox"/> Cooler packed with ice (✓)		Sample Receipt: STANDARD		Signature: Lorela Miranda		Signature: Louis Jackson		Signature:	
Specify Turnaround Requirements: STANDARD		Condition/Cooler Temp: _____		Firm: ARCADIS		Firm/Courier: ARCADIS		Firm:	
Shipping Tracking #:		Date/Time: 10/22/16 1815		Date/Time: 10/25/16 18:10		Date/Time:		Date/Time:	

Contact & Company Name: Bethpage Water District		Telephone:
Address: Bethpage, NY		Fax:
City: Bethpage, NY	State:	Zip:
Project Name/Location (City, State):		Project #:
Sampler's Printed Name: Kirk Vargas		Sampler's Signature:

Sample ID	Collection Date	Time	Type (✓)		Matrix
			Comp	Grab	
GM-35D2	10/22/14	1330		✓	W
GM-38D	10/22/14	1520		✓	W
GM-38D2	10/22/14	1630		✓	W

PARAMETER ANALYSIS & METHOD

Preservative	Filtered (✓)	# of Containers	Container Information
B	✓	2	1

Preservation Key:	Container Information Key:
A. H ₂ SO ₄	1. 40 ml Vial
B. HCL	2. 1L Amber
C. HNO ₃	3. 250 ml Plastic
D. NaOH	4. 500 ml Plastic
E. None	5. Encore
F. Other:	6. 2 oz. Glass
G. Other:	7. 4 oz. Glass
H. Other:	8. 8 oz. Glass
	9. Other:
	10. Other:

REMARKS

NO THUMP GUMMAU Split Samples

VOCS

Special QA/QC Instructions (✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Patco Environmental	Printed Name:	Pat Bazzani	Printed Name:	Adam Williams
<input checked="" type="checkbox"/> Cooler packed with ice (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Cooler Custody Seal (✓) <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm/Courier:	Firm/Courier:	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time:
		10/22/14 - 1700	10/22/14 17:17	10/22/14 17:27	10/22/14 17:27

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Contact & Company Name: Some Dos/ARCADIS
 Address: 211 Huntington Quadrangle
Suite # 150
 City: Melville NY State: NY Zip: 11747
 Telephone: 631 391-5247
 Fax: 631 249-7610
 E-mail Address: Soma.das@arcadis-us.com
 Project Name/Location (City, State): ARCADIS 400w/Bethpage, NY
 Project #: NY001496.314I.GWMI3
 Sampler's Printed Name: Karla Blonda
 Sampler's Signature: [Signature]

Sample ID	Collection		Type (✓)		Matrix
	Date	Time	Comp	Grab	
<u>TB10B314KM1</u>	<u>10/23/14</u>	<u>1400</u>	<u>✓</u>	<u>✓</u>	<u>W</u>
<u>6M-17D</u>	<u>10/23/14</u>	<u>1440</u>	<u>✓</u>	<u>✓</u>	<u>W</u>
<u>6M-17I</u>	<u>10/23/14</u>	<u>1555</u>	<u>✓</u>	<u>✓</u>	<u>W</u>

Preservation Key:
 A. H₂SO₄
 B. HCL
 C. HNO₃
 D. NaOH
 E. None
 F. Other: _____
 G. Other: _____
 H. Other: _____
 Matrix Key:
 SO - Soil
 W - Water
 T - Tissue
 SE - Sediment
 SL - Sludge
 A - Air
 NL - NAPL/OIL
 SW - Sample Wipe
 Other: _____

PARAMETER ANALYSIS & METHOD

Preservative Filtered (✓)	# of Containers	Container Information	REMARKS
<u>✓</u>	<u>3</u>	<u>1 1 1</u>	<u>TCL VOCs Method 8260</u>
<u>✓</u>	<u>3</u>	<u>1 1 1</u>	<u>TCL VOCs Method 8260</u>
<u>✓</u>	<u>3</u>	<u>1 1 1</u>	<u>TCL VOCs Method 8260</u>

Special Instructions/Comments: OUZ HYDRO ; NY001496.314I.GWMI3 = project#

Special QA/QC Instructions (✓):

Relinquished By	Received By	Relinquished By	Received By
Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____	Printed Name: <u>Chris Lau</u> Signature: <u>[Signature]</u> Firm/Courier: <u>Accutest</u> Date/Time: <u>10/23/14 14:55</u>	Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____	Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____

Laboratory Information and Receipt:
 Lab Name: Accutest
 Cooler packed with ice (✓)
 Intact Not Intact
 Sample Receipt:
 Specify Turnaround Requirements: STANDARD T.A.T.
 Shipping Tracking #: _____
 Condition/Cooler Temp: _____

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

Page 1 of 1

<p>Contact & Company Name: Soma Das / ARCADIS Address: 211 Huntington Quadrangle, Suite 1510, Melville, NY 11747 Telephone: 631-331-5247 Fax: 631-249-7610 E-mail Address: Soma.das@arcadis-us.com</p> <p>Project Name/Location (City, State): NGC 002 Hyd / Bethpage, NY</p> <p>Sampler's Printed Name: Karla Miranda / Pat Proctor</p> <p>Sampler's Signature: <i>[Signature]</i></p>	<p>Preservative Filtered (✓) B</p> <p># of Containers 2</p> <p>Container Information 1</p>	<p>Matrix W</p>	<p>Type (✓) Type: <input checked="" type="checkbox"/> Comp <input checked="" type="checkbox"/> Grab</p>	<p>Collection Date 10/21/14 0830</p> <p>Time 1123</p> <p>Time 10926</p>	<p>Sample ID TB102914 KMI TT-102D1 TT-102D2</p>	<p>REMARKS TCL VOCs US EPA Method 8240 TCL VOCs US EPA Method 8240 TCL VOCs US EPA Method 8240</p>			
<p>PARAMETER ANALYSIS & METHOD</p>									
<p>Special Instructions/Comments: <input type="checkbox"/> Special QA/QC Instructions (✓): NGC 002 HYDRO - Complete Analyte list; RUSH 2WK TAT</p>									
<p>Laboratory Information and Receipt</p> <p>Lab Name: <i>Accutest</i></p> <p><input checked="" type="checkbox"/> Cooler packed with ice (✓)</p> <p>Specify Turnaround Requirements: RUSH 2WK TAT</p> <p>Shipping Tracking #:</p>		<p>Relinquished By</p> <p>Printed Name: <i>Karla Miranda</i></p> <p>Signature: <i>[Signature]</i></p> <p>Firm/Courier: <i>ARCADIS</i></p> <p>Date/Time: <i>10/21/14 1300</i></p>		<p>Received By</p> <p>Printed Name: <i>Karla Miranda</i></p> <p>Signature: <i>[Signature]</i></p> <p>Firm/Courier: <i>ARCADIS</i></p> <p>Date/Time: <i>10/21/14 1300</i></p>		<p>Relinquished By</p> <p>Printed Name:</p> <p>Signature:</p> <p>Firm/Courier:</p> <p>Date/Time:</p>		<p>Laboratory Received By</p> <p>Printed Name:</p> <p>Signature:</p> <p>Firm:</p> <p>Date/Time:</p>	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Contact & Company Name: Sonja Das - ARCADIS Address: 3 Huntington Quads 1510 City: Melville NY 11747 State: NY Zip: 11747 Project Name/Location (City, State): 002 Northrop Grumman Building, NY Sampler's Printed Name: Pat Brzowski Sampler's Signature: <i>[Signature]</i>	Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: Sonja.das@arcadis-us.com	Preservative Filtered (✓) <u>B</u> # of Containers <u>2-3</u> Container Information <u>1</u>	PARAMETER ANALYSIS & METHOD <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> USEMETH 524 VCS PAPER 524 </div>
Send Results to: TB12814 PP2 BPOW 1-3 BPOW 2-1	Collection Date: 11/28/14 1400 11/28/14 1510 11/28/14 1840	Type (✓) Comp: ✓ Grab: ✓ ✓ ✓ ✓	Matrix W W W
REMARKS			
[Empty Remarks Section]			

- Keys**
- Preservation Key:**
- A. H₂SO₄
 - B. HCL
 - C. HNO₃
 - D. NaOH
 - E. None
 - F. Other: _____
 - G. Other: _____
 - H. Other: _____
- Container Information Key:**
- 1. 40 ml Vial
 - 2. 1 L Amber
 - 3. 250 ml Plastic
 - 4. 500 ml Plastic
 - 5. Encore
 - 6. 2 oz. Glass
 - 7. 4 oz. Glass
 - 8. 8 oz. Glass
 - 9. Other: _____
 - 10. Other: _____
- Matrix Key:**
- SE - Sediment
 - SO - Soil
 - W - Water
 - T - Tissue
 - NL - NAPL/OIL
 - SW - Sample Wipe
 - A - Air
 - Other: _____

Special QA/QC Instructions (✓):

002 Hydro

Lab Name: ACQUATEST - NJ	Received By:	Relinquished By:	Laboratory Received By:
<input type="checkbox"/> Cooler packed with ice (✓) Yes	Printed Name: Pat Brzowski	Printed Name: Pat Brzowski	Printed Name: James Kwah
<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>
Sample Receipt: 15°C	Firm/Courier: ARCADIS	Firm/Courier: ARCADIS	Firm: ACQUATEST
Condition/Cooler Temp: 15°C	Date/Time: 11/29/14 1900	Date/Time: 11/29/14 08:15	Date/Time: 11/29/14 08:15
Shipping Tracking #: Standard	YELLOW - Lab copy		
WHITE - Laboratory returns with results			
PINK - Retained by ARCADIS			

Contact & Company Name: Somades - ARCADIS Address: 2 Huntington Quad Suite 1510 City: Melville NY 11747 State: NY Zip: 11747 Project Name/Location (City, State): Melville, NY Sampler's Printed Name: David Pat Perzotti Project #: NY00196.311.1412 Sampler's Signature: <i>[Signature]</i>		Telephone: 631-391-5247 Fax: 631-249-7610 E-mail Address: Somades@arcadis-usa.com		Preservative Filtered (✓): B # of Containers: 2-9 Container Information: 1		Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____ Preservation Key: A. H ₂ SO ₄ B. HCL C. HNO ₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____ Matrix Key: SO - Soil W - Water T - Tissue SE - Sediment SL - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other: _____											
PARAMETER ANALYSIS & METHOD																	
Sample ID TB120914D14 BPOW1-1		Collection Date 12/19/14 12/19/14		Time 1300 1315		Type (✓) Comp Grab		Matrix W W		REMARKS MS/MSO sample							
Special Instructions/Comments: Ouz Hybro please use BPOW1-1 as a QA/QC MS/MSO sample <input type="checkbox"/> Special QA/QC Instructions (✓):																	
Lab Name: Accutest <input checked="" type="checkbox"/> Cooler packed with ice (✓) Specify Turnaround Requirements: y2 Standard Shipping Tracking #:			Laboratory Information and Receipt Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact Sample Receipt: Condition/Cooler Temp: _____			Relinquished By Printed Name: Pat Perzotti Signature: <i>[Signature]</i> Firm/Courier: Accutest Date/Time: 12/19/14 1700			Received By Printed Name: Chris Lynn Signature: <i>[Signature]</i> Firm/Courier: Accutest Date/Time: 12/19/14 9:30			Relinquished By Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____			Laboratory Received By Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____		

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

ID#: _____ Page 1 of 1

Contact & Company Name: Soma Das - ARCADIS Telephone: 631-391-5247		Preservative Filtered (✓) E	Container Information No
Address: 2 Huntington Quad, Suite 1510 Fax: 631-249-7610		# of Containers 3	
City, State, Zip Melville, NY 11747 E-mail Address: Soma.das@arcadis-us.com		Container Information 1 3	
Project Name/Location (City, State): Norwich Greenway 002, 00th St, Norwich, NY		PARAMETER ANALYSIS & METHOD	
Sampler's Printed Name: Derek H. Pat Perzacki			
Project #: NY014663141...		REMARKS 	
Sampler's Signature: <i>(Signature)</i>			

Sample ID	Collection Date	Time	Type (✓)		Matrix
			Comp	Grab	
Discharge 120914	12/19/14	1400		✓	W

Special Instructions/Comments: **002 Hydro**

Special QA/QC Instructions (✓):

Laboratory Information and Receipt		Relinquished By		Received By		Laboratory Received By	
Lab Name:	Accotest	Printed Name:	Pat Perzacki	Printed Name:	Chris Lap	Printed Name:	
<input checked="" type="checkbox"/> Cooler packed with ice (✓)	yes	Signature:	<i>(Signature)</i>	Signature:	<i>(Signature)</i>	Signature:	
Specify Turnaround Requirements:	Standard	Firm:	ARCADIS	Firm/Counter:	ACCOTEST	Firm:	
Shipping Tracking #:		Date/Time:	12/19/14 1700	Date/Time:	12/19/14 9:50	Date/Time:	



Infrastructure Water Environment Buildings

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

ID#:

Page 1 of 1

Send Results to: Contact & Company Name: Soma Das/ARCADIS Address: 2 Huntington Quadrangle Suite 1510 City: Medville NY State: NY Zip: 11747 E-mail Address: Soma.das@arcadis-us.com Project Name/Location (City, State): ou2ngscvabw/Bethpage, NY Sampler's Printed Name: Karolina Miranaka/Derek Motuszewski		Telephone: 631.391.5247 Fax: 631.249.7610 Project #: NY001496.314I.NAVI3 Sampler's Signature: <i>[Signature]</i>		Preservative Filtered (✓) # of Containers Container Information		Keys Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____ Preservation Key: A. H ₂ SO ₄ B. HCl C. HNO ₃ D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____ Matrix Key: SE - Sediment SW - Sample Wipe A - Air SO - Soil W - Water T - Tissue NL - NAPL/Oil SW - Sample Wipe Other: _____	
PARAMETER ANALYSIS & METHOD							
Sample ID TB12-114km1 Bpow 1-5 Bpow 1-6		Collection Date 12/10/14 12/10/14 12/10/14		Type Comp ✓ Grab ✓ ✓ ✓ ✓		Matrix W W W	
REMARKS <i>[Handwritten notes and signatures]</i>							

Special Instructions/Comments: "OU2-HYDRO"

Special QA/QC Instructions (✓):

Laboratory Information and Receipt	Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: <i>Accutest</i> <input checked="" type="checkbox"/> Cooler packed with ice (✓) Sample Receipt: STANDARD T.A.T. Shipping Tracking #: _____	Printed Name: <i>Karla Miranaka</i> Signature: <i>[Signature]</i> Firm: ARCADIS Date/Time: 12/10/14: 1730	Printed Name: <i>[Signature]</i> Signature: <i>[Signature]</i> Firm/Courier: _____ Date/Time: _____	Printed Name: _____ Signature: _____ Firm/Courier: _____ Date/Time: _____	Printed Name: _____ Signature: _____ Firm: _____ Date/Time: _____

Distribution: **WHITE** - Laboratory returns with results **YELLOW** - Lab copy **PINK** - Retained by ARCADIS

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

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<p>Contact & Company Name: Soma Das/ARCADIS 631.3915247 Address: 27 Huntington Quadrangle, Suite 1510, Great Neck, NY 11041 E-mail Address: soma.das@arcadis-us.com</p> <p>Project #: NCE 00240 en/Bethpage, NY Sampler's Printed Name: Karababiranda Maturamathi</p>	<p>Telephone: 631.3915247</p> <p>Fax: 631.249.7610</p>	<p>City: Melville, NY 11747</p> <p>State: NY</p> <p>Zip: 11747</p>	<p>Project Name/Location (City, State): NCE 00240 en/Bethpage, NY</p>	<p>Matrix Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other:</p>	<p>Container Information Key: A. H₂SO₄ B. HCL C. HNO₃ D. NaOH E. None F. Other: G. Other: H. Other:</p>	<p>Matrix Key: SE - Sediment SL - Sludge A - Air SO - Soil W - Water T - Tissue NL - NAP/LOI SW - Sample Wipe Other:</p>	<p>REMARKS</p>
PARAMETER ANALYSIS & METHOD							
Preservative Filtered (✓)		B	B				
# of Containers		2	3				
Container Information		1	1				
Sample ID	Collection Date	Time	Type (✓)	Comp	Grab	Matrix	
TB121214KMI	12/14/10	1000	✓			W	
FB121214KMI	12/14/10	1455	✓			W	
BPOW 2-2	12/14/10	1015	✓			W	
<input type="checkbox"/> Special QA/QC Instructions (✓):							
Special Instructions/Comments: "002-HYDRO"							
Lab Name: Accent		Relinquished By: Karababiranda		Received By: Marty Berg		Laboratory Received By:	
<input checked="" type="checkbox"/> Cooler packed with ice (✓)		Signature: Karababiranda		Signature: Marty Berg		Printed Name:	
Sample Receipt: STANDARD T.A.T		Firm: ARCADIS		Firm/Courier:		Signature:	
Shipping Tracking #:		Date/Time: 12/14/10 12:15		Date/Time:		Date/Time:	

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0312.GWMI2	Well ID:	BPOW 1-1	Sample ID: BPOW 1-1
Sample Date:	2/11/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	12:31 PM	Weather:	Cold Sunny 25 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series LaMotte 2020
Measuring Point:	TOC	Serial #:	913055 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	196.0 to 241.0 ft
Casing Diameter:	4 in	Packer Depth:	169 ft bls
PID Reading:	N/A	Packer Pressure:	115 psi
Measured Well Depth:	241 ft bmp	Pump Intake Depth:	Initial: 174 ft bmp Final: 174 ft bmp
Depth to Water:	30.43 ft bmp	Purge Time:	12:11 PM to 12:26 PM
Water Column in Well:	72 ft		
Gallons in Well:	46.8 gal	X Volumes to Remove:	3
		= Total Volume to Remove:	140 gal
		Actual Volume Removed:	141 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:11 PM	12	0	12	5.28	194	N/A	N/A	0.81	30.87
1	12:15 PM	8	47	11.9	5.05	115.7	N/A	N/A	0.56	30.89
2	12:21 PM	8	94	11.8	5.5	115.9	N/A	N/A	N/A	30.95
3	12:26 PM	10	141	10.6	5.77	113.9	N/A	N/A	1.35	30.98

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Turbidity Meter: Lamotte 2020 we

Technician: Gary Williams|Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0312.GWMI2	Well ID: BPOW 1-2	Sample ID: BPOW 1-2
Sample Date: 2/11/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:22 PM	Weather: Cold Sunny 25 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 913055	1810-0412
Casing Material: PVC sch 80	Screen Interval: 310.0 to 335.0 ft	
Casing Diameter: 4 in	Packer Depth: 295 ft bls	
PID Reading: N/A	Packer Pressure: 170 psi	
Measured Well Depth: 335 ft bmp	Pump Intake Depth: Initial: 300 ft bmp Final: 300 ft bmp	
Depth to Water: 32.93 ft bmp	Purge Time: 3:06 PM to 3:20 PM	
Water Column in Well: 40 ft		
Gallons in Well: 26 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 78 gal	
	Actual Volume Removed: 78 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:06 PM	8	0	12.8	5.25	97.7	N/A	N/A	1.64	35.47
1	3:11 PM	10	26	11.2	5.48	117.2	N/A	N/A	11.05	34.93
2	3:15 PM	10	52	11	5.34	109.2	N/A	N/A	3.57	34.83
3	3:20 PM	10	78	10.9	5.25	106.6	N/A	N/A	6.41	34.6

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Pump runs at varied rates during purge. However, when sampled, rate is slowed to laminar standard in compliance with VOC sample collection protocol. Turbidity Meter = Lamotte 2020 we

Technician: Gary Williams|Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0312.GWMI2	Well ID: BPOW 1-3	Sample ID: BPOW 1-3
Sample Date: 2/12/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:30 PM	Weather: Sunny Cold 25 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 913055	1810-0412
Casing Material: PVC sch 80	Screen Interval: 374.0 to 419.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 419 ft bmp	Pump Intake Depth: Initial: 369 ft bmp Final: 369 ft bmp	
Depth to Water: 33.0 ft bmp	Purge Time: 10:30 AM to 12:28 PM	
Water Column in Well: 386 ft		
Gallons in Well: 61.76 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 185.28 gal	
	Actual Volume Removed: 186 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:30 AM	1.5	0	11	3.85	159.3	N/A	N/A	16.9	33.29
1	11:00 AM	1.5	0	11.3	4	158.3	N/A	N/A	2.8	33.27
2	11:48 AM	1.5	124	11.2	4.03	162.2	N/A	N/A	1.15	33.3
3	12:28 PM	1.5	186	11.2	4.09	161.2	N/A	N/A	0.3	33.27

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Turbidity Meter = LaMotte 2020 we
 Sample taken from the dedicated
 tubing inside the well.

Technician: Gary Williams|Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons						

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.1312.NAVI2 **Well ID:** BPOW 1-4 **Sample ID:** BPOW 1-4
Sample Date: 2/26/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 12:10 PM **Weather:** Snowing|Cold|Cloudy 30 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	913055	LaMotte 2020we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	340.0 to 400.0 ft	
Casing Diameter:	4 in	Packer Depth:	330 ft bls	
PID Reading:	N/A	Packer Pressure:	186 psi	
Measured Well Depth:	405 ft bmp	Pump Intake Depth:	Initial: 331 ft bmp Final: 331 ft bmp	
Depth to Water:	13.49 ft bmp	Purge Time:	11:46 AM	to 12:08 PM
Water Column in Well:	75 ft			
Gallons in Well:	48.75 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	146.25 gal	
		Actual Volume Removed:	147 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:47 AM	0	0	11.2	4.84	59500	N/A	N/A	0.3	14.05
1	11:53 AM	6.5	49	10.5	4.2	62200	N/A	N/A	0.68	14.3
2	11:58 AM	9	98	10.1	4.25	61900	N/A	N/A	0.68	14.3
3	12:08 PM	8	147	9.5	4.32	61800	N/A	N/A	0.37	14.04

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pumping Rate: 6.5-9 gpm; rate slowed to laminar flow for/during sampling.

Comments

General Comments: N/A
 Sampling Remarks: Adapter fitting for Bow 1-5 used w/ new 1/2" poly tubing for sampling port. Pump assumed to be directly below packer-please check well specs. for exact depth.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	mS/cm	millisiemens per centimeter	NTU	nephelometric turbidity units	SU	standard units		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.1312.NAVI2	Well ID: BPOW 1-5	Sample ID: BPOW 1-5
Sample Date: 2/26/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:35 PM	Weather: Snowing Cloudy Cold 30 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 913055	LaMotte 2020we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 600.0 to 650.0 ft	
Casing Diameter: 4 in	Packer Depth: 490 ft bls	
PID Reading: N/A	Packer Pressure: 255 psi	
Measured Well Depth: 655 ft bmp	Pump Intake Depth: Initial: 491 ft bmp Final: 491 ft bmp	
Depth to Water: 13.80 ft bmp	Purge Time: 12:35 PM to 3:31 PM	
Water Column in Well: 165 ft		
Gallons in Well: 107.25 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 321.75 gal	
	Actual Volume Removed: 324 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:35 PM	6	0	10.1	5.41	14.6	N/A	N/A	1.52	14.14
1	2:12 PM	6	108	10	5.75	16.3	N/A	N/A	1.74	14.15
2	2:25 PM	7	216	10.6	5.72	16	N/A	N/A	4.97	14.02
3	3:31 PM	6	324	10.6	5.77	15.9	N/A	N/A	4.92	13.99

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pump rate: 6-7 gpm irate slowed to laminar flow for/during sampling.

Comments

General Comments: N/A
 Sampling Remarks: Pump assumed to be directly below packer- please check well specs. for exact depth.

Technician: Karla Miranda



Signature: _____

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.1312.NAVI2	Well ID:	BPOW 1-6	Sample ID: BPOW 1-6
Sample Date:	2/27/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	1:46 PM	Weather:	Cold Sunny 25 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	913055	LaMotte 2020we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	700.0 to 750.0 ft	
Casing Diameter:	4 in	Packer Depth:	500 ft bls	
PID Reading:	N/A	Packer Pressure:	255 psi	
Measured Well Depth:	755 ft bmp	Pump Intake Depth:	Initial: 419 ft bmp Final: 419 ft bmp	
Depth to Water:	14.00 ft bmp	Purge Time:	10:07 AM	to 1:43 PM
Water Column in Well:	265 ft			
Gallons in Well:	172.25 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	516.75 gal	
		Actual Volume Removed:	517 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:07 AM	8.5	0	11.4	6.17	52.9	N/A	N/A	1.55	14.8
1	10:29 AM	8.5	173	11	5.96	19.2	N/A	N/A	14.2	14.88
2	12:16 PM	10	346	11.2	5.1	15.9	N/A	N/A	2	14.2
3	1:43 PM	9.5	517	11.1	5.24	15.9	N/A	N/A	1.48	13.82

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pumping rate: 8.5-10 gal/min; rate slowed to laminar flow for/during sampling.

Comments

General Comments: N/A
 Sampling Remarks: Pump is assumed to be directly below packer- please see well specs for exact depth.

Technician: Karla Miranda

Signature:



Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0312.GWMI2	Well ID: BPOW 2-1	Sample ID: BPOW 2-1
Sample Date: 2/14/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 1:45 PM	Weather: Cold Windy Sunny 39 F	

Purge Method: Dedicated 2" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Model 2020we SN1810-0412
Casing Material: PVC sch 80	Screen Interval: 360.0 to 400.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 400 ft bmp	Pump Intake Depth: Initial: 360 ft bmp Final: 360 ft bmp	
Depth to Water: 20.92 ft bmp	Purge Time: 11:58 AM to 1:39 PM	
Water Column in Well: 379.08 ft		
Gallons in Well: 60.65 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 182 gal	
	Actual Volume Removed: 183 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumulative Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:59 AM	2	0	12.1	4.43	49.7	N/A	N/A	1.96	21.23
1	12:34 PM	2	61	12.2	4.48	49.7	N/A	N/A	0.01	21.36
2	1:06 PM	2	122	12.3	4.42	49.4	N/A	N/A	0.18	21.42
3	1:39 PM	2	183	12.5	4.43	48.9	N/A	N/A	0.08	21.49

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: sample collected from dedicated well tubing.

Technician: Patricia Prezorski|Karla Miranda

Patricia Prezorski
Signature: _____

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons						

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0312.GWMI2 **Well ID:** BPOW 2-2 **Sample ID:** BPOW 2-2
Sample Date: 2/18/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 12:22 PM **Weather:** Cloudy|Scattered Showers|Raining 32 F

Purge Method:	Non-Dedicated Rediflo 2	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	913055	LaMotte 2020we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	455.0 to 495.0 ft	
Casing Diameter:	2 in	Packer Depth:	N/A	
PID Reading:	N/A	Packer Pressure:	N/A	
Measured Well Depth:	495 ft bmp	Pump Intake Depth:	Initial: 61 ft bmp Final: 61 ft bmp	
Depth to Water:	20.17 ft bmp	Purge Time:	10:58 AM	to 12:20 PM
Water Column in Well:	474.83 ft			
Gallons in Well:	75.97 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	227.9 gal	
		Actual Volume Removed:	228 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:58 AM	2	0	13.4	5.28	48.2	N/A	N/A	2.5	21.14
1	11:20 AM	2.5	76	12.2	4.7	54.7	N/A	N/A	0.3	21.01
2	11:58 AM	2.5	152	12.2	4.54	66.9	N/A	N/A	0.51	21.12
3	12:20 PM	2	228	12.1	4.5	67.6	N/A	N/A	0.16	20.99

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: 1. Volume measured in 55 gal/1drum; therefore, parameters ev. ~76gal. 2. No dedicated equipment in down well; therefore, non-dedicated 2" Submersible Rediflow pump w/ 100' 1/2 poly (clean) tubing used; 3. Slight odor appeared in purge water @ ~1115am.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons						

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.1312.NAVI2	Well ID:	BPOW 2-3	Sample ID: BPOW 2-3
Sample Date:	2/12/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	3:48 PM	Weather:	Cold Sunny 25 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	913055	1810-0412
Casing Material:	PVC sch 80	Screen Interval:	564.0 to 594.0 ft	
Casing Diameter:	4 in	Packer Depth:	500 ft bls	
PID Reading:	N/A	Packer Pressure:	260 psi	
Measured Well Depth:	599 ft bmp	Pump Intake Depth:	Initial: 505 ft bmp Final: 505 ft bmp	
Depth to Water:	24.24 ft bmp	Purge Time:	3:06 PM	to 3:48 PM
Water Column in Well:	100 ft			
Gallons in Well:	65 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	195 gal	
		Actual Volume Removed:	195 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:07 PM	6.7	0	13.1	4.8	73.6	N/A	N/A	0.46	24.53
1	3:16 PM	6	65	11.9	5.21	72.3	N/A	N/A	0.22	24.45
2	3:30 PM	6	130	11.8	5.27	73.9	N/A	N/A	0.12	24.43
3	3:48 PM	3	195	11.3	5.42	74.5	N/A	N/A	0.09	24.42

Collected Sample Condition

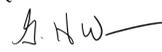
Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Turbidity Meter: LaMotte 2020 we Pump was slowed to 3 GP m, and then again, reduced to laminar flow while collecting sample.

Technician: Gary Williams|Karla Miranda

Karla Miranda
Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0312.GWMI2	Well ID: BPOW 3-1	Sample ID: BPOW 3-1
Sample Date: 2/19/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:00 PM	Weather: Cloudy Cold Raining 35 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 913055	LaMotte 2020we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 446.0 to 516.0 ft	
Casing Diameter: 4 in	Packer Depth: 414 ft bls	
PID Reading: N/A	Packer Pressure: 217 psi	
Measured Well Depth: 516 ft bmp	Pump Intake Depth: Initial: 415 ft bmp Final: 415 ft bmp	
Depth to Water: 25.75 ft bmp	Purge Time: 3:15 PM to 3:57 PM	
Water Column in Well: 102 ft		
Gallons in Well: 66.3 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 198.9 gal	
	Actual Volume Removed: 200 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:15 PM	0	0	14.2	4.25	106.4	N/A	N/A	0.22	27.24
1	3:36 PM	N/A	66	13.2	4.08	117.1	N/A	N/A	0.47	29.81
2	3:46 PM	N/A	132	12.8	4.08	115	N/A	N/A	1.88	30.02
3	3:57 PM	N/A	200	12.9	4.06	115.6	N/A	N/A	1.83	30.08

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	pump rate: 5-6 gpm; slowed to protocol for laminar conditions while sampling.

Comments

General Comments: N/A
 Sampling Remarks: Packer pressure based on standard formula and BTW; 222 psi used for packer pressure. Note: >2' drawdown during purge. Well Vol measured by 55gal/ 1 drum; therefore, parameter ev. ~66gal. Pump assumed to be right below packer; check specs for exact depth

Technician: Gary Williams|Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0312.GWMI2	Well ID:	BPOW 3-2	Sample ID: BPOW 3-2
Sample Date:	2/19/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	2:02 PM	Weather:	Cloudy Raining 35 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	913055	LaMotte 2020we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	612.0 to 647.0 ft	
Casing Diameter:	4 in	Packer Depth:	503 ft bls	
PID Reading:	N/A	Packer Pressure:	255 psi	
Measured Well Depth:	647 ft bmp	Pump Intake Depth:	Initial: 500 ft bmp Final: 500 ft bmp	
Depth to Water:	26.89 ft bmp	Purge Time:	12:05 PM	to 2:01 PM
Water Column in Well:	144 ft			
Gallons in Well:	93.6 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	280.8 gal	
		Actual Volume Removed:	282 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumulative Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:05 PM	5	0	12.3	5.51	59.2	N/A	N/A	0.41	27.5
1	12:24 PM	6	94	12	4.92	118.5	N/A	N/A	1.76	26.5
2	12:40 PM	6	188	11.9	4.99	61.4	N/A	N/A	0.96	25.47
3	2:01 PM	6	282	13	5.02	58.2	N/A	N/A	1.7	25.1

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	pump rate. 5-7 gpm; slowed to protocol for laminar conditions while sampling.

Comments

General Comments: N/A
 Sampling Remarks: pump assumed to be right below packer. Well vol measured in 55 gal/1drum; therefore, parameters ev. ~94gal. Please note rising WL during purge. Packer pressure based on standard formula and DTW;260 psi applied for packer pressure.

Technician: Gary Williams|Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.1312.NAVI2 **Well ID:** BPOW 3-3 **Sample ID:** BPOW 3-3
Sample Date: 2/25/2014 **Duplicate:** REP022514 **Other QC:** N/A
Sample Time: 12:06 PM **Weather:** Cold|Cloudy 30 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	913055	LaMotte 2020we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	580.0 to 620.0 ft	
Casing Diameter:	4 in	Packer Depth:	500 ft bls	
PID Reading:	N/A	Packer Pressure:	255 psi	
Measured Well Depth:	625 ft bmp	Pump Intake Depth:	Initial: 501 ft bmp Final: 501 ft bmp	
Depth to Water:	22.88 ft bmp	Purge Time:	11:17 AM	to 12:06 PM
Water Column in Well:	125 ft			
Gallons in Well:	81.25 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	243.75 gal	
		Actual Volume Removed:	246 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:17 AM	4	0	12.7	4.48	51.7	N/A	N/A	0.22	22.83
1	11:35 AM	5.5	82	11.6	5.08	49.8	N/A	N/A	0.1	22.83
2	11:50 AM	5	164	11.6	5.09	47.2	N/A	N/A	0.33	22.84
3	12:06 PM	N/A	246	10.6	5.18	46.4	N/A	N/A	0.27	22.83

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pump rate: 4-5.5 gal/min during purge, Purge rate lowered prior to sampling.

Comments

General Comments: N/A
 Sampling Remarks: Pump assumed to be set right below packer. see well specs for exact intake depth. packer pressure set at 258 during purge. 3-3 located further back in recharge basin. Well ID fading on manhole cover. Note: will need pressure gauge/connection for N2 line.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.1312.NAVI2	Well ID: BPOW 3-4	Sample ID: BPOW 3-4
Sample Date: 2/25/2014	Duplicate: N/A	Other QC: MS/MSD
Sample Time: 4:09 PM	Weather: Cloudy Cold Snowing 30 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 913055	LaMotte 2020we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 640.0 to 690.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: N/A	Packer Pressure: 255 psi	
Measured Well Depth: 695 ft bmp	Pump Intake Depth: Initial: 501 ft bmp Final: 501 ft bmp	
Depth to Water: 24.78 ft bmp	Purge Time: 1:56 PM to 4:09 PM	
Water Column in Well: 195 ft		
Gallons in Well: 126.75 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 380.25 gal	
	Actual Volume Removed: 381 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:56 PM	6	0	10.7	5.18	32.8	N/A	N/A	2	24.66
1	2:17 PM	6	127	11.4	5.03	34.8	N/A	N/A	2.74	24.66
2	3:48 PM	5	254	11.2	5.15	34.2	N/A	N/A	2.84	24.66
3	4:09 PM	3	381	11	5.18	33.8	N/A	N/A	2.47	24.67

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pump rate during purge: 5-6 gal; rate is slowed to laminar flow during/for sampling.

Comments

General Comments: N/A
 Sampling Remarks: Pump is assumed to be set directly below packer-see well specs. for exact intake depth.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: MW-01GF	Sample ID: MW-01GF
Sample Date: 5/7/2014	Duplicate: N/A	Other QC: Equipment Blank
Sample Time: 9:41 AM	Weather: Sunny 60 F	

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters: OAKTON 300 Series LaMotte 2020	
Measuring Point: TOC	Serial #: 855320 1810-0412	
Casing Material: unknown	Screen Interval: 48.0 to 58.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 58 ft bmp	Pump Intake Depth: Initial: 53 ft bmp Final: N/A	
Depth to Water: 42.37 ft bmp	Purge Time: 9:06 AM to 9:39 AM	
Water Column in Well: 15.63 ft bmp		
Gallons in Well: 10.1595 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 30.48 gal	
	Actual Volume Removed: 31.5 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	9:06 AM	N/A	N/A	15	6.52	111.1	N/A	N/A	2.22	42.45
1	9:17 AM	1	10.5	15.9	6.03	95.9	N/A	N/A	1.79	42.29
2	9:28 AM	1	21	16.2	5.84	104.7	N/A	N/A	1.44	42.27
3	9:39 AM	1	31.5	16.2	5.74	113.1	N/A	N/A	1.05	42.25

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
Total Cd/Cr (EPA 6010)	250 mL PE	1	HNO3	N/A
Dissolved Cd/Cr (EPA 6010)	250 mL PE	1	HNO3	0.45 micron field filter

Comments

General Comments: N/A
 Sampling Remarks: Purge rate lowered prior to sampling. PID MiniRae 2000; SN No: 110-011589.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	gal	gallons	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	HNO3	nitric acid	PE	polyethylene	SU	standard units	uS/cm	microsiemens per centimeter
ft bmp	feet below measuring point	N/A	not available						

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: MW-02GF	Sample ID: MW-02GF
Sample Date: 5/7/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 11:00 AM	Weather: Sunny 62 F	

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	1810-0412
Casing Material: unknown	Screen Interval: 49.0 to 59.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 59 ft bmp	Pump Intake Depth: Initial: 54 ft bmp Final: N/A	
Depth to Water: 43.05 ft bmp	Purge Time: 10:25 AM	to 10:58 AM
Water Column in Well: 15.95 ft		
Gallons in Well: 10.3675 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 31.1 gal	
	Actual Volume Removed: 31.5 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:25 AM	N/A	N/A	15.9	6.93	525	N/A	N/A	3.85	43.05
1	10:36 AM	1	10.5	16.6	7.24	563	N/A	N/A	5.7	43.05
2	10:47 AM	1	21	17	7.26	560	N/A	N/A	3.6	43.05
3	10:58 AM	1	31.5	17	7.24	555	N/A	N/A	2.17	43.05

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
Total Cd/Cr (EPA 6010)	250 mL PE	1	HNO3	N/A
Dissolved Cd/Cr (EPA 6010)	250 mL PE	1	HNO3	0.45 micron field filter

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	N/A	not available	PE	polyethylene	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing		
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** PLT1 MW-04 **Sample ID:** PLT1 MW-04
Sample Date: 5/16/2014 **Duplicate:** N/A **Other QC:** Equipment Blank
Sample Time: 12:23 PM **Weather:** Cloudy|Humid|Windy 64 F

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump **Water Quality Meters:** OAKTON 300 Series Turbidity Meter
Measuring Point: TOC **Serial #:** 855320 Lamotte 2020we; SN: 1810-0412
Casing Material: unknown **Screen Interval:** 41.5 to 56.5 ft
Casing Diameter: 2 in **Packer Depth:** N/A
PID Reading: 0.0 ppm **Packer Pressure:** N/A
Measured Well Depth: 56.5 ft bmp **Pump Intake Depth:** Initial: 46.5 ft bmp Final: N/A
Depth to Water: 43.37 ft bmp **Purge Time:** 12:12 PM to 12:21 PM
Water Column in Well: 13.13 ft
Gallons in Well: 2.1 gal **X Volumes to Remove:** 3
= Total Volume to Remove: 6.5 gal
Actual Volume Removed: 9 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumulative Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:12 PM	1	N/A	16.1	5.94	756	N/A	N/A	55.7	42.59
1	12:15 PM	1	3	16.2	5.95	790	N/A	N/A	75	43.7
2	12:18 PM	1	6	16.2	5.93	788	N/A	N/A	43.6	43.65
3	12:21 PM	1	9	16.2	5.93	804	N/A	N/A	12.41	43.46

Collected Sample Condition

Color: brown **Odor:** none **Appearance:** cloudy

Parameter	Container	# of Containers	Preservative	Comments
Total Cr (EPA 6010)	250 mL PE	1	HNO3	N/A
Dissolved Cr (EPA 6010)	250 mL PE	1	HNO3	Field filtered with 0.45 micron Quick filter.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. PID MiniRae 2000; SN: 110-011589.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	N/A	not available	PE	polyethylene	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing		
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY
Project No:	NY001496.0314.GWMI2	Well ID:	PLT1 MW-05
Sample Date:	5/7/2014	Duplicate:	N/A
Sample Time:	4:13 PM	Weather:	Sunny 60 F
		Sample ID:	PLT1 MW-05
		Other QC:	N/A

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	unknown	Screen Interval:	38.0 to 58.0 ft	
Casing Diameter:	2 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	58 ft bmp	Pump Intake Depth:	Initial: 48 ft bmp Final: N/A	
Depth to Water:	40.53 ft bmp	Purge Time:	4:03 PM to 4:12 PM	
Water Column in Well:	17.47 ft			
Gallons in Well:	2.7952 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	9 gal	
		Actual Volume Removed:	9 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	4:03 PM	N/A	N/A	17	6.4	709	N/A	N/A	23.3	37.29
1	4:06 PM	1	3	17	6.3	709	N/A	N/A	13.9	37.18
2	4:09 PM	1	6	17.1	6.3	709	N/A	N/A	23.3	37.31
3	4:12 PM	1	9	17.2	6.3	716	N/A	N/A	13.3	37.31

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** cloudy

Parameter	Container	# of Containers	Preservative	Comments
Total Cr (EPA 6010)	250 mL PE	1	HNO3	N/A
Dissolved Cr (EPA 6010)	250 mL PE	1	HNO3	0.45 micron Quick Filter

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Patricia Prezorski
Signature: *Patricia Prezorski*

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	N/A	not available	PE	polyethylene	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing		
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** PLT1 MW-06 **Sample ID:** PLT1 MW-06
Sample Date: 5/7/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 4:52 PM **Weather:** Sunny 60 F

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	unknown	Screen Interval:	47.0 to 62.0 ft	
Casing Diameter:	2 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	62 ft bmp	Pump Intake Depth:	Initial: 54 ft bmp Final: N/A	
Depth to Water:	44.19 ft bmp	Purge Time:	4:42 PM	to 4:51 PM
Water Column in Well:	17.81 ft			
Gallons in Well:	2.85 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	8.55 gal	
		Actual Volume Removed:	9 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	4:42 PM	N/A	N/A	15.1	6.21	1465	N/A	N/A	45.1	42.65
1	4:45 PM	1	3	15.1	6.1	1376	N/A	N/A	23.4	42.65
2	4:48 PM	1	6	15.2	6.03	1352	N/A	N/A	10.52	42.61
3	4:51 PM	1	9	15.3	6.12	1382	N/A	N/A	8.58	42.61

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
Total Cr (EPA 6010)	250 mL PE	1	HNO3	N/A
Dissolved Cr (EPA 6010)	250 mL PE	1	HNO3	0.45 micron Quick Filter

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	N/A	not available	PE	polyethylene	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing		
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-13D	Sample ID: GM-13D
Sample Date: 5/5/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 11:35 AM	Weather: Sunny 60 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	LaMotte 2020we: 1810-0412
Casing Material: unknown	Screen Interval: 200.0 to 210.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 210 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 44.58 ft bmp	Purge Time: 10:30 AM	to 11:30 AM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed:	30 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:30 AM	0	0	15.1	7.6	128.3	169	37.2	3.56	N/A
1	10:35 AM	500	2.5	15.5	7.18	122.6	182	19.8	3.66	44.62
2	10:40 AM	500	5	15.7	5.81	119.4	194	6.5	3.96	N/A
3	10:45 AM	500	7.5	15.7	5.62	118.8	150	5	3.7	44.59
N/A	10:50 AM	500	10	15.9	5.48	118.5	214	4.7	2.05	N/A
5	10:55 AM	500	12.5	15.9	5.51	118.4	235	4.6	1.87	44.64
N/A	11:00 AM	500	15	15.8	5.54	118.7	230	5	2.09	N/A
N/A	11:05 AM	500	17.5	15.8	5.56	119	237	5.1	1.63	44.68
N/A	11:10 AM	500	20	15.9	5.56	119	241	4.9	1.33	N/A
N/A	11:15 AM	500	22.5	15.9	5.56	119.2	243	4.5	1.41	44.63
N/A	11:20 AM	500	25	15.9	5.56	118.6	243	4.5	1.5	N/A
N/A	11:25 AM	500	27.5	16	5.57	118.6	248	4.4	1.02	44.63
N/A	11:30 AM	500	30	16	5.55	118.5	252	4.6	1.14	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Total volume purged ~35(~9gal). other
 WQ:DO:YSI550A; ORP:Oakton pH 6 Acorn series. PID reading N/A-
 pid didn't calibrate properly.

Technician: Karla Miranda

Signature: _____



Abbreviations:

C	degrees Celsius	ft	feet	L	liters	mL/min	milliliters per minute	N/A	not available	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
F	degrees Fahrenheit	HCL	hydrochloric acid							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-15S	Sample ID: GM-15S
Sample Date:	5/7/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	1:23 PM	Weather:	Sunny 65 F	

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	PVC sch 40	Screen Interval:	70.0 to 80.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	80 ft bmp	Pump Intake Depth:	Initial: 70 ft bmp Final: ft bmp	
Depth to Water:	44.05 ft bmp	Purge Time:	12:34 PM to 1:22 PM	
Water Column in Well:	35.95 ft			
Gallons in Well:	23.37 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	70.11 gal	
		Actual Volume Removed:	71 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:34 PM	1.5	N/A	17.6	6.25	557	N/A	N/A	2.51	44.4
1	12:50 PM	1.5	23.5	16.9	6.05	507	N/A	N/A	2.04	44.41
2	1:06 PM	1.5	47	17	5.96	491	N/A	N/A	1.24	44.43
3	1:22 PM	1.5	71	16.9	5.97	488	N/A	N/A	1.17	44.41

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
Total Cr (EPA 6010)	250 mL PE	1	HNO3	N/A
Dissovled Cr (EPA 6010)	250 mL PE	1	HNO3	Field filtered with 0.45 micron Quick Filter.
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	PE	polyethylene	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	HNO3	nitric acid	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** GM-15I **Sample ID:** GM-15I
Sample Date: 6/4/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 1:39 PM **Weather:** Hot|Humid|Sunny 74 F

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	Lamotte 2020we; SN: 1810-0412
Casing Material:	unknown	Screen Interval:	95.0 to 105.0 ft	
Casing Diameter:	4 in	Packer Depth:	94 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	75 psi	
Measured Well Depth:	105 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	43.71 ft bmp	Purge Time:	12:28 PM	to 1:36 PM
Water Column in Well:	11 ft			
Gallons in Well:	7.15 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	22 gal	
		Actual Volume Removed:	22 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:28 PM	N/A	N/A	18.4	6.06	420	N/A	N/A	0.68	40.62
1	12:56 PM	1500	7.5	16.6	5.82	476	N/A	N/A	0.89	40.78
2	1:10 PM	1500	15	16.5	5.81	474	N/A	N/A	1.06	40.75
3	1:36 PM	1500	22	16.6	5.65	475	N/A	N/A	0.91	40.86

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589. Pump intake just below the packer.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-15D	Sample ID: GM-15D
Sample Date:	6/4/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	3:51 PM	Weather:	Humid Hot Sunny 75 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series YSI 550A
Measuring Point:	TOC	Serial #:	855320 12H101335
Casing Material:	PVC sch 40	Screen Interval:	332.0 to 342.0 ft
Casing Diameter:	4 in	Packer Depth:	N/A
PID Reading:	0.0 ppm	Packer Pressure:	N/A
Measured Well Depth:	342 ft bmp	Pump Intake Depth:	Initial: 337 ft bmp Final: N/A
Depth to Water:	46.15 ft bmp	Purge Time:	2:50 PM to 3:50 PM
Water Column in Well:	_____		
Gallons in Well:	_____	X Volumes to Remove:	_____
		= Total Volume to Remove:	_____
		Actual Volume Removed:	24 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:50 PM	400	N/A	19.2	5.09	145.4	159	2.42	2.42	N/A
N/A	2:55 PM	400	N/A	19.5	5.01	145.7	159	3.3	N/A	46.25
N/A	3:00 PM	400	N/A	20	4.91	143.5	154	5.09	0.4	N/A
N/A	3:05 PM	400	N/A	20.2	4.87	140.8	144	6.47	N/A	46.15
N/A	3:10 PM	400	N/A	20.2	4.85	141	142	6.65	N/A	N/A
N/A	3:15 PM	400	N/A	20	4.85	141.7	138	6.84	N/A	46.11
N/A	3:20 PM	400	N/A	20	4.84	142.3	138	5.96	N/A	N/A
N/A	3:25 PM	400	N/A	20.1	4.84	143.1	138	6.3	N/A	46.24
N/A	3:30 PM	400	N/A	20.2	4.83	143.4	136	6.43	0.45	N/A
N/A	3:35 PM	400	N/A	20	4.83	143.7	137	6.12	N/A	46.25
N/A	3:40 PM	400	N/A	19.8	4.83	144.5	134	5.7	N/A	N/A
N/A	3:45 PM	400	N/A	19.5	4.83	145.3	134	6.53	N/A	N/A
N/A	3:50 PM	400	24	19.6	4.83	148.5	136	5.85	0.3	46.22

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Manhole cover damaged & one bolt eyelet broken. Temp manhole cover in place & holding with one bolt. Checking on replacement 3 bolt cover.

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589. Lamotte 2020we; SN: 1810-0412. ORP meter; Oakton pH6+; SN: 914549.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-15D2	Sample ID: GM-15D2
Sample Date: 6/4/2014	Duplicate: N/A	Other QC: MS/MSD
Sample Time: 11:52 AM	Weather: Hot Sunny Humid 70 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 40	Screen Interval: 536.0 to 556.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 556 ft bmp	Pump Intake Depth: Initial: 546 ft bmp Final: N/A	
Depth to Water: 48.95 ft bmp	Purge Time: 10:50 AM to 11:50 AM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove: _____	
	= Total Volume to Remove: _____	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:50 AM	400	N/A	19.8	5.13	73.1	159	1.14	0.9	N/A
N/A	10:55 AM	400	N/A	20.8	4.92	66.8	165	2.66	N/A	N/A
N/A	11:00 AM	400	N/A	21.3	4.98	66.3	165	3.88	N/A	48.97
N/A	11:05 AM	400	N/A	21.6	4.88	66.1	158	4.09	N/A	N/A
N/A	11:10 AM	400	N/A	21.7	4.85	65.8	159	5.18	N/A	48.92
N/A	11:15 AM	400	N/A	21.7	4.87	65.7	159	5.33	N/A	N/A
N/A	11:20 AM	400	N/A	21.7	4.85	65.8	155	4.8	N/A	48.91
N/A	11:25 AM	400	N/A	21.7	4.88	65.8	152	4.83	N/A	N/A
N/A	11:30 AM	400	N/A	21.8	4.87	65.8	152	5.32	N/A	48.91
N/A	11:35 AM	400	N/A	22	4.88	65.8	156	5.54	N/A	N/A
N/A	11:40 AM	400	N/A	22	4.89	65.8	151	5.57	0.52	48.94
N/A	11:45 AM	400	N/A	22	4.89	65.8	149	4.75	N/A	N/A
N/A	11:50 AM	400	24	22	4.9	65.6	148	5.04	0.61	48.94

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589. Lamotte 2020we; SN: 1810-0412. ORP meter; Oakton pH6+; SN: 914549.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. Long 1/2" purge tubing on asphalt pavement.

Technician: Karla Miranda|Patricia Prezorski

Signature: _____



Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-17I	Sample ID: GM-17I
Sample Date:	5/5/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	4:02 PM	Weather:	Sunny 60 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	LaMotte 2020 we: 1810-0412
Casing Material:	PVC sch 40	Screen Interval:	99.5 to 119.5 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	120 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	42.80 ft bmp	Purge Time:	3:00 PM	to 4:00 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:00 PM	0	0	23.9	6.09	85.8	267	7.4	0.91	N/A
N/A	3:05 PM	400	2	18.4	6.09	85.4	272	7.49	0.53	42.8
N/A	3:10 PM	400	4	17.9	6.08	85.4	275	7.55	0.34	N/A
N/A	3:15 PM	400	6	17.7	6.07	85.3	277	7.39	0.45	42.78
N/A	3:20 PM	400	8	17.5	6.07	85.4	279	7.79	0.52	N/A
N/A	3:25 PM	400	10	17.4	6.1	85.4	278	7.37	0.4	42.78
N/A	3:30 PM	400	12	17.2	6.12	85.5	279	7.54	0.45	N/A
N/A	3:35 PM	400	14	17.1	6.1	85.3	279	7.2	0.51	42.76
N/A	3:40 PM	400	16	17	6.14	85.3	278	7.5	0.39	N/A
N/A	3:45 PM	400	18	17	6.13	85.1	283	7.65	0.45	42.78
N/A	3:50 PM	400	20	16.9	6.13	85	280	7.83	0.43	N/A
N/A	3:55 PM	400	22	16.8	6.16	85	283	7.64	0.44	42.78
N/A	4:00 PM	400	24	16.8	6.13	85.1	280	7.79	0.46	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: N/A

Technician: Karla Miranda

Signature: _____

Abbreviations:

C	degrees Celsius	ft	feet	L	liters	mL/min	milliliters per minute	N/A	not available	ppm	parts per million
CG	clear glass	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	HCL	hydrochloric acid							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-17D	Sample ID: GM-17D
Sample Date:	5/5/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	2:08 PM	Weather:	Sunny 60 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	La Motte 2020we: 1810-0412
Casing Material:	PVC sch 40	Screen Interval:	278.0 to 298.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	298 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	47.60 ft bmp	Purge Time:	1:05 PM	to 2:00 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:05 PM	0	0	17.9	5.95	97.9	273	75.9	1.89	N/A
N/A	1:10 PM	400	2	16.1	5.31	97.9	272	75.7	0.57	47.61
N/A	1:15 PM	400	4	16.5	5.31	98.4	268	66.2	0.42	N/A
N/A	1:20 PM	400	6	17.6	5.32	97.7	270	70.7	0.31	47.64
N/A	1:25 PM	400	8	17.8	5.27	97.7	270	70.5	0.43	N/A
N/A	1:30 PM	400	10	17.9	5.26	97.7	270	68.5	0.34	47.65
N/A	1:35 PM	400	12	17.9	5.23	97.7	271	72.5	0.36	N/A
N/A	1:40 PM	400	14	18	5.22	97.6	272	68.4	0.43	47.65
N/A	1:45 PM	400	16	17.9	5.13	97.8	273	69.1	0.43	N/A
N/A	1:50 PM	400	18	N/A	N/A	N/A	274	69.4	0.43	47.7
N/A	1:55 PM	400	20	17.9	5.37	82.1	276	70.7	0.42	N/A
N/A	2:00 PM	400	22	17.9	5.37	81.9	276	70.9	0.4	47.65
N/A	2:00 PM	400	24	18	5.33	82	278	73.1	0.44	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Please note D.O. readings are in %, not mg/L; other WQ: D.O.: YSI550A, ORP: Oakton. Reading #10 does not include WQ data for pH, temp and cond. due to battery failure at that time. Batteries replaced. Total Avg WQ for these parameters demonstrate stability

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	L	liters	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	HCL	hydrochloric acid							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** GM-18I **Sample ID:** GM-18I
Sample Date: 5/19/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 4:04 PM **Weather:** Sunny|Windy 65 F

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	LaMotte 2020 we: 1810-0412
Casing Material:	unknown	Screen Interval:	95.0 to 105.0 ft	
Casing Diameter:	4 in	Packer Depth:	94 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	80 psi	
Measured Well Depth:	105 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	40.42 ft bmp	Purge Time:	3:11 PM	to 4:00 PM
Water Column in Well:	11 ft			
Gallons in Well:	7.15 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	21.45 gal	
		Actual Volume Removed:	22 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:11 PM	2280	N/A	16.8	7.2	117.8	N/A	N/A	2.53	37.51
1	3:30 PM	2280	7.5	16.2	6.07	98.6	N/A	N/A	2.28	37.46
2	3:44 PM	2280	15	16.3	5.91	98.6	N/A	N/A	1.8	37.48
3	4:00 PM	2280	22	16.3	6.06	98.4	N/A	N/A	1.81	37.41

Collected Sample Condition

Color: clear **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Initial-2V parameters were clear but had small brown-black suspended specks. 3V had no specks. Flow rate was lowered to laminar during sampling. Pump assumed to be right below packer. See Instrument Calibration Log for addtl. instrument details.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-18D	Sample ID: GM-18D
Sample Date: 5/1/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:15 PM	Weather: Hot Sunny 72 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 80	Screen Interval: 290.0 to 300.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 300 ft bmp	Pump Intake Depth: Initial: 295 ft bmp Final: N/A	
Depth to Water: 43.71 ft bmp	Purge Time: 3:13 PM to 4:08 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 19.25 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:13 PM	N/A	N/A	18.7	5.37	82.9	220	6.6	N/A	43.78
N/A	3:18 PM	350	N/A	20	5.34	84.6	221	6.4	N/A	N/A
N/A	3:23 PM	350	N/A	20.5	5.41	85.6	225	6.65	1.26	43.8
N/A	3:28 PM	350	N/A	20.8	5.41	86.5	242	6.88	N/A	N/A
N/A	3:33 PM	350	N/A	20.9	5.42	86.8	221	5.88	N/A	43.79
N/A	3:38 PM	350	N/A	20.8	5.43	87.6	217	6.1	0.69	N/A
N/A	3:43 PM	350	N/A	21	5.43	87.8	220	5.95	N/A	43.89
N/A	3:48 PM	350	N/A	20.9	5.44	88.5	223	5.77	N/A	N/A
N/A	3:53 PM	350	N/A	20.8	5.44	88.6	225	5.91	0.56	43.89
N/A	3:58 PM	350	N/A	20.7	5.44	89	228	5.95	N/A	N/A
N/A	4:03 PM	350	N/A	20.5	5.44	89.2	231	5.68	N/A	43.85
N/A	4:08 PM	350	19.25	20.3	5.44	89.5	233	6.08	0.46	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Rate lowered prior to sampling.

Comments

General Comments: N/A
 Sampling Remarks: Turbidity meter; Lamotte 2020we; SN No: 1810-0412. ORP Meter; Oakton pH6+; SN No: 914549.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-20I	Sample ID: GM-20I
Sample Date: 5/16/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 10:41 AM	Weather: Cloudy Humid Windy 64 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Lamotte 2020we; SN: 1810-0412
Casing Material: unknown	Screen Interval: 95.0 to 105.0 ft	
Casing Diameter: 4 in	Packer Depth: 94 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 80 psi	
Measured Well Depth: 105 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 36.00 ft bmp	Purge Time: 9:52 AM to 10:40 AM	
Water Column in Well: 11 ft		
Gallons in Well: 7.15 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 22 gal	
	Actual Volume Removed: 22 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	9:52 AM	2000	N/A	12.1	9.82	105.3	N/A	N/A	2.13	33.4
1	10:10 AM	2000	7.5	12.1	10.7	147.1	N/A	N/A	2.94	34.84
2	10:24 AM	2000	15	12	10.66	139.3	N/A	N/A	4.03	34.76
3	10:40 AM	2000	22	12.4	10.61	129.3	N/A	N/A	3.67	34.09

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-20D	Sample ID: GM-20D
Sample Date: 5/16/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 11:30 AM	Weather: Cloudy Humid Windy 64 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter: Lamotte 2020we; SN: 1810-0412
Measuring Point: TOC	Serial #: 855320	
Casing Material: unknown	Screen Interval: 216.0 to 226.0 ft	
Casing Diameter: 4 in	Packer Depth: 215 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 130 psi	
Measured Well Depth: 226 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 37.60 ft bmp	Purge Time: 10:49 AM to 11:28 AM	
Water Column in Well: 11 ft		
Gallons in Well: 7.15 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 22 gal	
	Actual Volume Removed: 22 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:49 AM	2100	N/A	11.5	9.12	72.9	N/A	N/A	2.16	37.6
1	11:02 AM	2100	7.5	13.9	7.6	72.5	N/A	N/A	1.12	37.54
2	11:15 AM	2100	15	14.4	6.93	72	N/A	N/A	1.03	37.52
3	11:28 AM	2100	22	14.3	6.61	71.8	N/A	N/A	1.14	37.5

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-21S	Sample ID: GM-21S
Sample Date: 6/2/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:32 PM	Weather: Sunny 70 F	

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	3597-3502
Casing Material: unknown	Screen Interval: 63.0 to 67.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 67.00 ft bmp	Pump Intake Depth: Initial: 65 ft bmp Final: N/A	
Depth to Water: 36.72 ft bmp	Purge Time: 4:14 PM	to 4:29 PM
Water Column in Well: 30.28 ft		
Gallons in Well: 4.85 gal	Volumes to Remove: 3	
	Total Volume to Remove: 15 gal	
	Actual Volume Removed: 15 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	4:14 PM	1	N/A	15.4	10.13	81.4	N/A	N/A	210	37.62
1	4:19 PM	1	5	14.5	7.89	70	N/A	N/A	24	37.69
2	4:24 PM	1	10	14.4	7.49	67.8	N/A	N/A	10	37.69
3	4:29 PM	1	15	15.1	7.45	67.1	N/A	N/A	5.7	37.45

Collected Sample Condition

Color: yellow-brown **Odor:** none **Appearance:** cloudy

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-21I	Sample ID: GM-21I
Sample Date:	6/3/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	5:32 PM	Weather:	Hot Sunny 75 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	Lamotte 2020we; SN: 1810-0412
Casing Material:	unknown	Screen Interval:	130.0 to 140.0 ft	
Casing Diameter:	4 in	Packer Depth:	129 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	90 psi	
Measured Well Depth:	140 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	38.23 ft bmp	Purge Time:	4:55 PM	to 5:31 PM
Water Column in Well:	11 ft			
Gallons in Well:	7.15 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	22 gal	
		Actual Volume Removed:	22 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	4:55 PM	N/A	N/A	13.6	8.48	104.1	N/A	N/A	6.75	36.52
1	5:10 PM	2100	7.5	13.3	10.25	103.6	N/A	N/A	6	37.94
2	5:20 PM	2100	15	12.9	10.26	103.5	N/A	N/A	6.8	37.98
3	5:31 PM	2100	22	12.9	10.24	102.4	N/A	N/A	5.82	37.92

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589. Pump intake just below packer.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch
CG	clear glass	ft bmp	feet below measuring point	mg/L	milligrams per liter	N/A	not available	ppm	parts per million	SU	standard units
F	degrees Fahrenheit	gal	gallons							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-21D	Sample ID: GM-21D
Sample Date: 6/3/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:22 PM	Weather: Sunny Hot 77 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 80	Screen Interval: 278.0 to 288.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 288 ft bmp	Pump Intake Depth: Initial: 283 ft bmp Final: N/A	
Depth to Water: 42.27 ft bmp	Purge Time: 3:20 PM to 4:20 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove: _____	
	= Total Volume to Remove: _____	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:20 PM	400	N/A	15.6	4.98	58.6	180	3.44	4.16	N/A
N/A	3:25 PM	400	N/A	16.4	4.83	58.1	182	4.14	N/A	42.32
N/A	3:30 PM	400	N/A	17.1	4.69	57.2	181	5.44	N/A	N/A
N/A	3:35 PM	400	N/A	17.1	4.61	56.6	180	5.25	N/A	42.32
N/A	3:40 PM	400	N/A	16.8	4.54	55.4	170	4.84	N/A	N/A
N/A	3:45 PM	400	N/A	16.9	4.55	55.2	167	4.78	N/A	42.31
N/A	3:50 PM	400	N/A	16.8	4.53	55	165	4.9	N/A	N/A
N/A	3:55 PM	400	N/A	16.7	4.56	55.2	163	5.01	N/A	42.31
N/A	4:00 PM	400	N/A	16.7	4.54	55.9	160	4.8	N/A	N/A
N/A	4:05 PM	400	N/A	16.9	4.56	55.9	154	5.02	N/A	42.3
N/A	4:10 PM	400	N/A	16.8	4.54	56.2	153	5.02	N/A	N/A
N/A	4:15 PM	400	N/A	16.8	4.54	56.2	156	5.2	N/A	N/A
N/A	4:20 PM	400	24	16.7	4.54	56.7	155	4.91	2.2	42.29



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Rate lowered prior to sampling.

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589. Lamotte 2020we; SN: 1810-0412. ORP meter; Oakton pH6+; SN: 914549.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-33D2	Sample ID: GM-33D2
Sample Date:	6/5/2014	Duplicate:	N/A	
Sample Time:	12:19 PM	Weather:	Scattered Showers Cloudy Raining 63 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series YSI 550A
Measuring Point:	TOC	Serial #:	855320 12H101335
Casing Material:	PVC sch 40	Screen Interval:	500.0 to 520.0 ft
Casing Diameter:	4 in	Packer Depth:	N/A
PID Reading:	0.0 ppm	Packer Pressure:	N/A
Measured Well Depth:	520 ft bmp	Pump Intake Depth:	Initial: 510 ft bmp Final: N/A
Depth to Water:	48.08 ft bmp	Purge Time:	11:05 AM to 12:15 PM
Water Column in Well:	_____		
Gallons in Well:	_____	X Volumes to Remove:	_____
		= Total Volume to Remove:	_____
		Actual Volume Removed:	34.4 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:05 AM	500	N/A	15.9	6.57	66.3	155	5.93	N/A	N/A
N/A	11:10 AM	490	N/A	15.8	6.48	64.7	139	5.89	0.7	48.12
N/A	11:15 AM	490	N/A	15.8	6.42	63.6	128	5.61	N/A	N/A
N/A	11:20 AM	490	N/A	15.9	6.42	63.6	125	5.55	N/A	48.04
N/A	11:25 AM	490	N/A	16	6.31	63.5	141	5.84	N/A	N/A
N/A	11:30 AM	490	N/A	16	6.28	63.5	150	5.67	N/A	48.07
N/A	11:35 AM	490	N/A	16	6.28	63.6	157	6.25	N/A	N/A
N/A	11:40 AM	490	N/A	16	6.28	63.6	158	5.62	N/A	48.05
N/A	11:45 AM	490	N/A	16	6.26	63.7	150	5.66	N/A	N/A
N/A	11:50 AM	490	N/A	16.1	6.04	63.7	159	5.63	N/A	48.06
N/A	11:55 AM	490	N/A	16.1	5.55	64.4	171	6.21	N/A	N/A
N/A	12:00 PM	490	N/A	16.1	5.52	64.4	173	6.17	N/A	48.05
N/A	12:05 PM	490	29.5	16.2	5.19	64.8	189	6.17	N/A	N/A
N/A	12:10 PM	490	N/A	16.3	5.13	65	186	6.32	N/A	48.1
N/A	12:15 PM	490	34.4	16.4	5.09	64.8	183	6.62	1.93	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: PID Minirae 2000; SN: 110-011589. Lamotte 2020we; SN: 1810-0412. ORP meter; Oakton pH6+; SN: 914549.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	L	liters	mL/min	milliliters per minute	N/A	not available	ppm	parts per million
CG	clear glass	gal	gallons	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	HCL	hydrochloric acid							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-34D	Sample ID: GM-34D
Sample Date:	4/24/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	2:18 PM	Weather:	Sunny Cold 50 F	

Purge Method:	Other Pump	Water Quality Meters:	OAKTON 300 Series	YSI 550A
Measuring Point:	TOC	Serial #:	855320	12H101335
Casing Material:	PVC sch 40	Screen Interval:	309.0 to 319.0 ft	
Casing Diameter:	2 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	319 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	13.81 ft bmp	Purge Time:	1:10 PM	to 2:15 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	19.5 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:10 PM	300	N/A	14.3	7.92	111.8	126	1.11	2.92	N/A
N/A	1:15 PM	300	N/A	16.2	8.46	112.6	151	0.65	N/A	N/A
N/A	1:20 PM	300	N/A	16.4	8.55	113.9	156	0.52	N/A	13.82
N/A	1:25 PM	300	N/A	16.4	8.62	114	158	0.48	N/A	N/A
N/A	1:30 PM	300	N/A	16.4	8.68	114.6	162	0.55	0.96	13.78
N/A	1:35 PM	300	N/A	16.4	8.76	114.8	163	0.45	N/A	N/A
N/A	1:40 PM	300	N/A	16.5	9.18	115.2	144	0.42	N/A	13.82
N/A	1:45 PM	300	N/A	16.6	9.33	117.3	108	0.43	N/A	N/A
N/A	1:50 PM	300	N/A	16.4	9.32	117.4	118	0.42	N/A	13.64
N/A	1:55 PM	300	N/A	16.2	9.2	117.6	132	0.44	2.16	N/A
N/A	2:00 PM	300	N/A	16.2	9.13	117.6	139	0.42	N/A	13.71
N/A	2:05 PM	300	N/A	16.4	8.41	117.7	108	0.44	N/A	N/A
N/A	2:10 PM	300	N/A	16.4	8.11	117.9	94	0.44	N/A	13.87
N/A	2:15 PM	300	19.5	16.4	7.99	117.7	83	0.45	1.8	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Dedicated bladder pump. Pump stuck in well -just make connections to sample. 34D is 2" well. Transducer wire hanging from 34D well cap into 34D2. 34D has plastic J plug cap.

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN No: 110-011589.
 Lamotte 2020we; SN No: 1810-0412. Oakton pH 6+ ORP Meter; SN No: 914549.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-34D2	Sample ID: GM-34D2
Sample Date:	4/24/2014	Duplicate:	N/A	Other QC: Equipment Blank
Sample Time:	12:15 PM	Weather:	Cold Sunny 50 F	

Purge Method:	Non-Dedicated Bladder Pump	Water Quality Meters:	OAKTON 300 Series	YSI 550A
Measuring Point:	TOC	Serial #:	855320	12H101335
Casing Material:	PVC sch 40	Screen Interval:	510.0 to 520.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	520 ft bmp	Pump Intake Depth:	Initial: 515 ft bmp Final: ft bmp	
Depth to Water:	15.20 ft bmp	Purge Time:	11:12 AM to 12:12 PM	
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	30 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:12 AM	500	N/A	13.5	7.14	102.3	79	2.7	29.6	N/A
N/A	11:17 AM	500	N/A	14.5	7.47	94.7	69	0.7	N/A	15.22
N/A	11:22 AM	500	N/A	14.6	7.58	90.9	67	0.71	N/A	N/A
N/A	11:27 AM	500	N/A	14.8	7.62	88.1	65	0.68	N/A	15.22
N/A	11:32 AM	500	N/A	14.9	7.66	87.4	64	0.65	N/A	N/A
N/A	11:37 AM	500	N/A	15	7.72	85.5	57	0.77	N/A	15.28
N/A	11:42 AM	500	N/A	15.2	7.83	83.6	51	0.64	N/A	N/A
N/A	11:47 AM	500	N/A	15.5	7.54	79.6	51	2.08	N/A	15.25
N/A	11:52 AM	500	N/A	15.6	7.21	80	56	2.56	16.2	N/A
N/A	11:57 AM	500	N/A	15.7	6.91	82.3	73	3.04	N/A	15.28
N/A	12:02 PM	500	N/A	15.8	6.7	80.9	91	3.51	N/A	N/A
N/A	12:07 PM	500	N/A	15.8	6.66	79.5	96	3.22	N/A	15.26
N/A	12:12 PM	500	30	16	6.6	78.9	99	3.32	6.35	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: brown Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	34D2 is 4" well. Transducer in 34D2 (hanging from 34D well cap). Transducer removed at 10:30 am. Transducer returned @ 2:40pm. Rate lowered prior to sampling.

Comments

General Comments: N/A
 Sampling Remarks: Oakton pH6+ ORP Meter; SN No: 914549.
 Lamotte 2020 we turbidimeter; SN No: 1810-0412. PID MiniRae 2000; SN No: 110-011589.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	L	liters	mL/min	milliliters per minute	N/A	not available	ppm	parts per million
CG	clear glass	gal	gallons	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	HCL	hydrochloric acid							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** GM-35D2 **Sample ID:** GM-35D2
Sample Date: 4/30/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 11:30 AM **Weather:** Cold|Raining 46 F

Purge Method: Dedicated 2" Bladder Pump **Water Quality Meters:** OAKTON 300 Series LaMotte 2020
Measuring Point: TOC **Serial #:** 855320 2020we; 1810-0412
Casing Material: PVC sch 40 **Screen Interval:** 510.0 to 530.0 ft
Casing Diameter: 4 in **Packer Depth:** 507 ft bls
PID Reading: N/A **Packer Pressure:** 255 psi
Measured Well Depth: 530 ft bmp **Pump Intake Depth:** Initial: N/A Final: N/A
Depth to Water: 38.83 ft bmp **Purge Time:** 10:19 AM to 11:28 AM
Water Column in Well: _____
Gallons in Well: _____ **X Volumes to Remove:** _____
= Total Volume to Remove: _____
Actual Volume Removed: 45 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:19 AM	N/A	N/A	13.9	5.95	81.8	N/A	N/A	0.45	38.84
N/A	10:43 AM	2550	15	13.7	5.37	80.9	N/A	N/A	0.48	38.84
N/A	11:06 AM	2550	30	13.8	5.46	80.2	N/A	N/A	0.54	38.85
N/A	11:28 AM	2550	45	13.7	5.42	82.9	N/A	N/A	0.36	38.85

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: No PID reading - raining. Pump set just below packer. Split sample with Bethpage Water District - 40 ml vials from Pace Lab. Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	gal	gallons	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	HCL	hydrochloric acid								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-36D	Sample ID: GM-36D
Sample Date:	4/28/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	2:31 PM	Weather:	Sunny 60 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	Lamotte 2020we; SN No: 1810-0412.
Casing Material:	PVC sch 40	Screen Interval:	204.0 to 214.0 ft	
Casing Diameter:	4 in	Packer Depth:	202 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	130 psi	
Measured Well Depth:	214 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	34.36 ft bmp	Purge Time:	1:24 PM	to 2:29 PM
Water Column in Well:	12 ft			
Gallons in Well:	7.8 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	23.4 gal	
		Actual Volume Removed:	24 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumulative Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:24 PM	N/A	N/A	12.5	6.14	155.6	N/A	N/A	2.04	33.91
1	1:48 PM	1600	8	14.6	5.56	176.7	N/A	N/A	0.71	31.53
2	2:08 PM	1600	16	15.1	5.65	179.1	N/A	N/A	0.64	29.78
3	2:29 PM	1600	24	15.1	5.65	181.1	N/A	N/A	0.81	27.5

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Pump setting is just below packer. Split sample with Bethpage Water District-40 ml vials from Pace lab. Well missing dedicated sample port. 36D2 sample port deconed & new tubing attached.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-36D2	Sample ID: GM-36D2
Sample Date:	4/28/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	12:47 PM	Weather:	Sunny 60 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series Turbidity Meter
Measuring Point:	TOC	Serial #:	855320 Lamotte 2020we; SN No: 1810-0412
Casing Material:	PVC sch 40	Screen Interval:	520.0 to 540.0 ft
Casing Diameter:	4 in	Packer Depth:	518 ft bls
PID Reading:	0.0 ppm	Packer Pressure:	260 psi
Measured Well Depth:	540 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A
Depth to Water:	37.29 ft bmp	Purge Time:	11:16 AM to 12:45 PM
Water Column in Well:	22 ft		
Gallons in Well:	14.3 gal	X Volumes to Remove:	3
		= Total Volume to Remove:	42.9 gal
		Actual Volume Removed:	43 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:16 AM	N/A	N/A	13.9	7.53	87.6	N/A	N/A	1.24	37.49
1	11:49 AM	2160	14.3	14.7	10.83	140.9	N/A	N/A	3.19	37.83
2	12:19 PM	2160	28.6	14.8	8.36	71.3	N/A	N/A	1.99	37.75
3	12:45 PM	2160	43	14.7	6.48	65.9	N/A	N/A	1.83	37.75

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN No. 110-011589.

Comments

General Comments: N/A
 Sampling Remarks: Pump setting is just below packer. Split sample with Bethpage Water District - 40 ml vials from Pace lab. Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** GM-37D **Sample ID:** GM-37D
Sample Date: 5/6/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 12:37 PM **Weather:** Sunny|Cloudy 65 F

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	PVC sch 40	Screen Interval:	242.0 to 262.0 ft	
Casing Diameter:	4 in	Packer Depth:	240 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	140 psi	
Measured Well Depth:	262 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	38.49 ft bmp	Purge Time:	10:23 AM	to 12:37 PM
Water Column in Well:	22 ft			
Gallons in Well:	14.30 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	42.9 gal	
		Actual Volume Removed:	43 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:23 AM	N/A	N/A	15.6	5.53	117.1	N/A	N/A	0.62	36.51
1	11:11 AM	1350	15	15.4	5.11	117.4	N/A	N/A	0.44	36.46
2	11:55 AM	1350	30	15.2	5.17	117	N/A	N/A	1.91	36.34
3	12:37 PM	1350	43	15.5	5.19	117	N/A	N/A	0.71	36.31

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Pump intake just below packer. Rate lowered prior to sampling. Split sample with Bethpage Water District - 40 ml vials from Pace lab.

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN No: 110-011589.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** GM-37D2 **Sample ID:** GM-37D2
Sample Date: 5/6/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 3:53 PM **Weather:** Cloudy|Sunny 65 F

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	PVC sch 40	Screen Interval:	370.0 to 390.0 ft	
Casing Diameter:	4 in	Packer Depth:	367 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	195 psi	
Measured Well Depth:	390 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	39.22 ft bmp	Purge Time:	1:03 PM	to 3:50 PM
Water Column in Well:	23 ft			
Gallons in Well:	14.95 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	44.85 gal	
		Actual Volume Removed:	45 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:03 PM	N/A	N/A	15	5.66	83.8	N/A	N/A	2.38	38.93
1	2:00 PM	1000	15	15.8	5.36	93.9	N/A	N/A	2.29	36.12
2	2:57 PM	1000	30	15.5	5.32	92.2	N/A	N/A	1.07	36.22
3	3:50 PM	1000	45	15.7	5.22	90.9	N/A	N/A	0.74	36.12

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Pump intake just below packer. Rate lowered prior to sampling. Split sample with Bethpage Water District - 40 ml vials from Pace Lab.

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN No: 110-011589.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-38D	Sample ID: GM-38D
Sample Date: 4/29/2014	Duplicate: REP042914	Other QC: N/A
Sample Time: 1:43 PM	Weather: Cold Cloudy Windy 47 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 40	Screen Interval: 320.0 to 340.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 340 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 37.54 ft bmp	Purge Time: 12:40 PM	to 1:40 PM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 16.5 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:40 PM	200	N/A	12.7	6.37	72.1	224	2.02	0.83	N/A
N/A	12:45 PM	200	N/A	12.4	6.4	72.6	217	1.49	N/A	37.48
N/A	12:50 PM	650	N/A	12.3	6.45	71.6	211	1.28	N/A	N/A
N/A	12:55 PM	650	N/A	12.8	6.33	71.7	212	0.63	N/A	37.58
N/A	1:00 PM	200	N/A	12.8	5.61	72.4	231	0.59	N/A	N/A
N/A	1:05 PM	200	N/A	12.6	5.58	72.8	234	0.65	N/A	37.62
N/A	1:10 PM	200	N/A	12.3	5.49	73.1	239	0.73	N/A	N/A
N/A	1:15 PM	200	N/A	12.4	5.48	74	242	0.91	N/A	37.6
N/A	1:20 PM	200	N/A	12.3	5.46	74.4	242	0.94	N/A	N/A
N/A	1:25 PM	200	N/A	12.2	5.44	75.2	240	0.93	N/A	37.63
N/A	1:30 PM	200	N/A	12.2	5.44	75.2	241	0.93	N/A	N/A
N/A	1:35 PM	200	N/A	12.2	5.42	76	240	0.96	N/A	37.65
N/A	1:40 PM	200	16.5	12.1	5.45	76	239	0.95	0.67	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Split sample with Bethpage Water District - 40 ml vials from Pace lab. Rate lowered prior to sampling.

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN No.: 110-011589.
 Turbidity meter; Lamotte 2020we; SN No.: 1810-0412. ORP meter;
 Oakton pH 6+; SN No.: 914549.

Technician: Patricia Prezorski

Signature: *John F. Schwarz*
Pat Prezorski

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-38D2	Sample ID: GM-38D2
Sample Date: 4/29/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:10 PM	Weather: Cold Cloudy 47 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 40	Screen Interval: 475.0 to 495.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 495 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 40.43 ft bmp	Purge Time: 11:07 AM	to 12:07 PM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 23 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:07 AM	150	N/A	12.8	5.18	119.1	259	5.15	1.16	40.41
N/A	11:12 AM	200	N/A	12.6	5.18	118.8	259	4.99	N/A	N/A
N/A	11:17 AM	200	N/A	12.1	5.13	118.3	258	4.3	N/A	40.17
N/A	11:22 AM	N/A	N/A	12.7	5.02	118.6	262	3.31	N/A	N/A
N/A	11:27 AM	600	N/A	12.5	5.02	119	265	3.3	N/A	39.91
N/A	11:32 AM	500	N/A	13	4.96	120	269	2.84	0.43	N/A
N/A	11:37 AM	500	N/A	13.2	4.96	120.3	273	2.33	N/A	39.68
N/A	11:42 AM	500	N/A	13.1	4.92	121	278	1.74	N/A	N/A
N/A	11:47 AM	500	N/A	13	4.9	121	279	1.58	N/A	N/A
N/A	11:52 AM	500	N/A	13	4.9	120.6	284	1.29	N/A	39.47
N/A	11:57 AM	500	N/A	13	4.92	120.8	285	1.14	N/A	N/A
N/A	12:02 PM	500	N/A	12.9	4.93	121.2	291	1.07	N/A	N/A
N/A	12:07 PM	500	23	13	4.94	121.1	292	1.07	0.81	39.3

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Rate lowered prior to sampling. Well purged/sampled with new 1/2" tubing. Split sample with Bethpage Water District - 40 ml vials from Pace lab.

Comments

General Comments: N/A
 Sampling Remarks: Turbidity meter: Lamotte 2020we; SN No: 1810-0412. PID MiniRae 2000; SN No.: 110-011589. ORP Meter; Oakton pH 6+; SN No: 914549.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-39DA	Sample ID: GM-39DA
Sample Date: 5/9/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 11:36 AM	Weather: Cloudy Humid Scattered Showers 60 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 80	Screen Interval: 262.0 to 282.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 282 ft bmp	Pump Intake Depth: Initial: 272 ft bmp Final: N/A	
Depth to Water: 37.56 ft bmp	Purge Time: 10:35 AM	to 11:35 AM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:35 AM	400	N/A	15.2	6.32	161.4	275	6.26	0.9	N/A
N/A	10:40 AM	400	N/A	15.2	5.54	147.5	300	6.32	N/A	37.59
N/A	10:45 AM	400	N/A	15.2	5.36	150.1	306	6.66	N/A	N/A
N/A	10:50 AM	400	N/A	15.2	5.33	151.7	311	6.73	N/A	37.51
N/A	10:55 AM	400	N/A	15.2	5.31	152.6	314	6.53	N/A	N/A
N/A	11:00 AM	400	N/A	15.2	5.31	152.6	312	6.51	N/A	37.55
N/A	11:05 AM	400	N/A	15.1	5.31	153	312	6.57	N/A	N/A
N/A	11:10 AM	400	N/A	15.2	5.31	152.5	315	6.51	N/A	37.55
N/A	11:15 AM	400	N/A	15.2	5.31	152.8	317	6.54	N/A	N/A
N/A	11:20 AM	400	N/A	15.3	5.28	152.5	N/A	N/A	N/A	37.52
N/A	11:25 AM	400	N/A	15.3	5.3	152.6	316	6.71	N/A	N/A
N/A	11:30 AM	400	N/A	15.3	5.3	152.4	315	6.88	N/A	37.55
N/A	11:35 AM	400	24	15.4	5.3	151.8	314	6.82	0.34	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Lamotte 2020we turbidity meter; SN No: 1810-0412. ORP meter; Oakton pH6+; SN No: 914549.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: _____



Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-39DB	Sample ID: GM-39DB
Sample Date:	5/9/2014	Duplicate:	N/A	
Sample Time:	12:47 PM	Weather:	Cloudy Humid Sunny 60 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series YSI 550A
Measuring Point:	TOC	Serial #:	855320 12H101335
Casing Material:	PVC sch 80	Screen Interval:	410.0 to 420.0 ft
Casing Diameter:	4 in	Packer Depth:	N/A
PID Reading:	0.0 ppm	Packer Pressure:	N/A
Measured Well Depth:	420 ft bmp	Pump Intake Depth:	Initial: 415 ft bmp Final: N/A
Depth to Water:	40.35 ft bmp	Purge Time:	11:45 AM to 12:45 PM
Water Column in Well:			
Gallons in Well:		X Volumes to Remove:	
		= Total Volume to Remove:	
		Actual Volume Removed:	24 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:45 AM	400	N/A	15.6	5.42	101.7	299	5.57	0.51	N/A
N/A	11:50 AM	400	N/A	16	5.34	95.5	307	6.99	N/A	40.27
N/A	11:55 AM	400	N/A	16.5	5.28	96	310	6.85	N/A	N/A
N/A	12:00 PM	400	N/A	16.6	5.26	97.2	308	6.47	N/A	40.29
N/A	12:05 PM	400	N/A	16.8	5.25	97.4	308	6.47	N/A	N/A
N/A	12:10 PM	400	N/A	16.9	5.25	97.9	312	6.93	N/A	40.31
N/A	12:15 PM	400	N/A	17	5.26	97.7	315	7.07	N/A	N/A
N/A	12:20 PM	400	N/A	16.8	5.26	97.5	314	6.68	0.34	40.28
N/A	12:25 PM	400	N/A	16.7	5.25	97.6	315	6.79	N/A	N/A
N/A	12:30 PM	400	N/A	16.7	5.25	97.5	315	7.17	N/A	N/A
N/A	12:35 PM	400	N/A	16.6	5.25	97.2	316	7.1	N/A	40.28
N/A	12:40 PM	400	N/A	16.4	5.26	97.3	315	7.07	N/A	N/A
N/A	12:45 PM	400	24	16.3	5.25	97.2	315	7.16	0.38	40.35



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	ORP meter; Oakton pH6+; SN No: 914549. Lamotte 2020we turbidity meter; SN No.: 1810-0412.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** GM-70D2 **Sample ID:** GM-70D2
Sample Date: 4/30/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 5:23 PM **Weather:** Cold|Cloudy|Raining|Scattered Showers 47 F

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	LaMotte 2020	OAKTON 300 Series
Measuring Point:	TOC	Serial #:	2020we: 1810-0412	855320
Casing Material:	unknown	Screen Interval:	310.0 to 330.0 ft	
Casing Diameter:	4 in	Packer Depth:	308 ft bls	
PID Reading:	N/A	Packer Pressure:	165 psi	
Measured Well Depth:	330 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	40.50 ft bmp	Purge Time:	12:46 PM	to 5:23 PM
Water Column in Well:	22 ft			
Gallons in Well:	14.30 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	42.9 gal	
		Actual Volume Removed:	43 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:46 PM	N/A	N/A	14.1	5.23	66.4	N/A	N/A	0.58	40.51
1	1:20 PM	2000	15	14	5.17	66.4	N/A	N/A	0.54	38.55
2	2:42 PM	450	30	13.4	5.05	63.2	N/A	N/A	0.5	32.05
3	5:23 PM	180	43	13.1	2.74	1172	N/A	N/A	0.76	21.5

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Purge rate set to 2 Liters per gallon. Just prior to 2V purge rate dropped to 450 ml per minute. Purge rate continued to drop.

Comments

General Comments: N/A
 Sampling Remarks: No PID reading- raining. Pump intake just below packer. Change in DTW due to rain & slight leak under threaded connection.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-71D2	Sample ID: GM-71D2
Sample Date: 5/1/2014	Duplicate: N/A	Other QC: MS/MSD
Sample Time: 12:05 PM	Weather: Scattered Showers Cloudy Humid 59 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	1810-0412
Casing Material: unknown	Screen Interval: 444.0 to 464.0 ft	
Casing Diameter: 4 in	Packer Depth: 442 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 225 psi	
Measured Well Depth: 464 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 40.84 ft bmp	Purge Time: 10:49 AM	to 12:02 PM
Water Column in Well: 22 ft		
Gallons in Well: 14.30 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 42.9 gal	
	Actual Volume Removed: 43 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:49 AM	N/A	N/A	14.4	5.3	119.2	N/A	N/A	0.75	40.58
1	11:16 AM	2400	15	14.2	5.02	106.5	N/A	N/A	2.12	38.24
2	11:41 AM	2400	30	14.3	5	107.8	N/A	N/A	0.74	35.82
3	12:02 PM	2400	43	14.4	5.01	105.4	N/A	N/A	0.73	33.82

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589. Pump intake just below packer.

Comments

General Comments: N/A
 Sampling Remarks: Change in DTW due to leak under old style threaded connection. Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-73D	Sample ID: GM-73D
Sample Date: 5/9/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 2:12 PM	Weather: Cloudy Humid 60 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 80	Screen Interval: 401.0 to 411.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 411 ft bmp	Pump Intake Depth: Initial: 406 ft bmp Final: N/A	
Depth to Water: 42.63 ft bmp	Purge Time: 1:10 PM to 2:10 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:10 PM	400	N/A	13.8	5.23	75.6	320	7.05	N/A	N/A
N/A	1:15 PM	400	N/A	13.8	5.23	75.4	321	6.62	0.76	42.65
N/A	1:20 PM	400	N/A	13.9	5.15	75.1	321	6.75	N/A	N/A
N/A	1:25 PM	400	N/A	13.9	5.16	74.3	320	7.08	N/A	42.67
N/A	1:30 PM	400	N/A	13.8	5.14	74.1	325	7.55	N/A	N/A
N/A	1:35 PM	400	N/A	13.8	5.14	73.9	326	7.55	N/A	42.66
N/A	1:40 PM	400	N/A	13.8	5.12	73.9	327	7.26	N/A	N/A
N/A	1:45 PM	400	N/A	13.8	5.13	73.7	327	7.71	N/A	42.67
N/A	1:50 PM	400	N/A	13.8	5.13	73.9	327	7.69	6.82	N/A
N/A	1:55 PM	400	N/A	13.8	5.12	73.9	327	7.37	N/A	42.69
N/A	2:00 PM	400	N/A	13.8	5.12	74	330	7.64	N/A	N/A
N/A	2:05 PM	400	N/A	13.9	5.11	73.8	331	7.63	N/A	42.69
N/A	2:10 PM	400	24	14	5.11	73.9	327	7.59	2.76	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: N/A Odor: N/A Appearance: N/A

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	ORP meter; Oakton pH6+; SN: 914549. Lamotte 200we turbidity meter; SN 1810-0412.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-73D2	Sample ID: GM-73D2
Sample Date: 5/8/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:05 PM	Weather: Cloudy Humid Scattered Showers 57 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 40	Screen Interval: 532.0 to 552.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 552 ft bmp	Pump Intake Depth: Initial: 542 ft bmp Final: N/A	
Depth to Water: 44.62 ft bmp	Purge Time: 3:00 PM to 4:00 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:00 PM	N/A	N/A	12.4	5.49	68.8	195	10.25	N/A	44.62
N/A	3:05 PM	400	N/A	12.4	5.31	69.6	191	6.15	N/A	N/A
N/A	3:10 PM	400	N/A	12.6	5.23	69.6	190	5.96	N/A	43.62
N/A	3:15 PM	400	N/A	12.5	5.17	69.8	191	6.5	1.6	N/A
N/A	3:20 PM	400	N/A	12.4	5.15	69.8	192	6.38	N/A	43.92
N/A	3:25 PM	400	N/A	12.3	5.14	70.1	193	6.6	N/A	N/A
N/A	3:30 PM	400	N/A	12.3	5.12	70	193	6.67	0.51	43.9
N/A	3:35 PM	400	N/A	12.3	5.13	70.2	193	6.53	N/A	N/A
N/A	3:40 PM	400	N/A	12.3	5.14	70.1	193	6.75	N/A	43.85
N/A	3:45 PM	400	N/A	12.3	5.13	70.1	194	6.64	0.39	N/A
N/A	3:50 PM	400	N/A	12.3	5.13	70.1	193	6.91	N/A	43.85
N/A	3:55 PM	400	N/A	12.3	5.11	70.1	194	6.67	N/A	N/A
N/A	4:00 PM	400	24	12.3	5.13	70.1	195	6.52	0.33	43.85



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	ORP meter; Oakton pH6+; SN No: 914549. Lamotte 2020we turbidity meter; SN No: 1810-0412.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. No PID reading due to rain.

Technician: Patricia Prezorski

Signature: *Stephen P. Schwarz*
Pat Prezorski

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-74I	Sample ID: GM-74I
Sample Date:	5/8/2014	Duplicate:	N/A	
Sample Time:	11:35 AM	Weather:	Cloudy Humid Raining Scattered Showers 56 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series YSI 550A
Measuring Point:	TOC	Serial #:	855320 12H101335
Casing Material:	PVC sch 40	Screen Interval:	94.0 to 114.0 ft
Casing Diameter:	4 in	Packer Depth:	N/A
PID Reading:	N/A	Packer Pressure:	N/A
Measured Well Depth:	114 ft bmp	Pump Intake Depth:	Initial: 104 ft bmp Final: N/A
Depth to Water:	40.06 ft bmp	Purge Time:	10:30 AM to 11:30 AM
Water Column in Well:			
Gallons in Well:		X Volumes to Remove:	
		= Total Volume to Remove:	
		Actual Volume Removed:	27 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:30 AM	N/A	N/A	10.8	6.37	86.5	185	8.12	N/A	40.06
N/A	10:35 AM	450	N/A	10.9	6.24	88.9	187	7.56	N/A	N/A
N/A	10:40 AM	450	N/A	10.9	5.95	89.2	185	7.59	0.87	40.13
N/A	10:45 AM	450	N/A	10.7	5.82	85.9	179	7.42	N/A	N/A
N/A	10:50 AM	450	N/A	10.6	5.8	85.6	178	7.45	N/A	40.15
N/A	10:55 AM	450	N/A	10.6	5.79	83.2	180	7.84	0.87	N/A
N/A	11:00 AM	450	N/A	10.6	5.79	81.6	181	8.32	N/A	40.11
N/A	11:05 AM	450	N/A	10.6	5.79	80.6	179	7.82	N/A	N/A
N/A	11:10 AM	450	N/A	10.6	5.78	80	178	8.32	0.8	40.11
N/A	11:15 AM	450	N/A	10.6	5.8	79.8	178	7.37	N/A	N/A
N/A	11:20 AM	450	N/A	10.7	5.82	79.3	177	7.4	N/A	40.13
N/A	11:25 AM	450	N/A	10.7	5.81	79.3	177	7.36	0.75	N/A
N/A	11:30 AM	450	27	10.7	5.81	79.3	176	7.62	N/A	40.15



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Lamotte 2020we turbidity meter; SN No: 1810-0412. ORP meter; Oakton pH6+; SN No: 914549.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. No PID reading due to rain.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-74D	Sample ID: GM-74D
Sample Date:	5/8/2014	Duplicate:	N/A	
Sample Time:	1:00 PM	Weather:	Cloudy Scattered Showers 55 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	YSI 550A
Measuring Point:	TOC	Serial #:	855320	12H101335
Casing Material:	PVC sch 40	Screen Interval:	295.0 to 305.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	N/A	Packer Pressure:	N/A	
Measured Well Depth:	305 ft bmp	Pump Intake Depth:	Initial: 300 ft bmp Final: N/A	
Depth to Water:	44.31 ft bmp	Purge Time:	11:55 AM	to 12:55 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	27 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:55 AM	N/A	N/A	10.9	5.29	67.2	187	8.76	N/A	44.31
N/A	12:00 PM	450	N/A	10.8	5.09	65.7	191	6.34	N/A	N/A
N/A	12:05 PM	450	N/A	11.1	5.05	64	195	5.71	N/A	44.32
N/A	12:10 PM	450	N/A	11	5.05	63.1	200	5.91	0.73	N/A
N/A	12:15 PM	450	N/A	10.9	5.01	62.7	203	5.73	N/A	44.32
N/A	12:20 PM	450	N/A	10.9	5.01	62.4	204	5.72	N/A	N/A
N/A	12:25 PM	450	N/A	10.9	4.98	62.2	205	5.76	0.6	44.33
N/A	12:30 PM	450	N/A	10.9	4.98	62	206	6.02	N/A	N/A
N/A	12:35 PM	450	N/A	11	4.98	62.2	207	6.06	N/A	44.35
N/A	12:40 PM	450	N/A	11	4.98	62.4	207	6.1	0.39	N/A
N/A	12:45 PM	450	N/A	11	4.98	62.4	207	5.93	N/A	44.41
N/A	12:50 PM	450	N/A	11	4.98	62.4	208	6.03	N/A	N/A
N/A	12:55 PM	450	27	11.1	4.97	62.4	208	6.13	0.45	44.33

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Lamotte 2020we turbidity meter; SN No: 1810-0412. ORP meter; Oakton pH6+; SN No: 914549.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. No PID reading due to rain.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								



Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-74D2	Sample ID: GM-74D2
Sample Date:	5/8/2014	Duplicate:	N/A	
Sample Time:	2:20 PM	Weather:	Cloudy Humid Scattered Showers 56 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series YSI 550A
Measuring Point:	TOC	Serial #:	855320 12H101335
Casing Material:	PVC sch 40	Screen Interval:	542.0 to 562.0 ft
Casing Diameter:	4 in	Packer Depth:	N/A
PID Reading:	N/A	Packer Pressure:	N/A
Measured Well Depth:	562 ft bmp	Pump Intake Depth:	Initial: 552 ft bmp Final: N/A
Depth to Water:	49.91 ft bmp	Purge Time:	1:15 PM to 2:15 PM
Water Column in Well:			
Gallons in Well:		X Volumes to Remove:	
		= Total Volume to Remove:	
		Actual Volume Removed:	25.5 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:15 PM	N/A	N/A	11.4	5.39	62.9	204	8.26	N/A	49.91
N/A	1:20 PM	N/A	N/A	11.2	5.18	62.4	197	3.19	N/A	N/A
N/A	1:25 PM	N/A	N/A	11.4	5.24	62.1	192	1.55	N/A	49.91
N/A	1:30 PM	N/A	N/A	11.2	5.27	63.5	188	2.64	1.06	N/A
N/A	1:35 PM	425	N/A	11.2	5.25	62.3	186	2.71	N/A	49.91
N/A	1:40 PM	425	N/A	11.3	5.19	61.1	186	2.89	N/A	N/A
N/A	1:45 PM	425	N/A	11.3	5.19	60.9	186	3.08	0.47	49.92
N/A	1:50 PM	425	N/A	11.3	5.16	60.7	186	3.18	N/A	N/A
N/A	1:55 PM	425	N/A	11.3	5.16	60.8	185	3.08	N/A	49.92
N/A	2:00 PM	425	N/A	11.4	5.16	60.9	186	3.34	0.4	N/A
N/A	2:05 PM	425	N/A	11.4	5.14	61.4	187	3.49	N/A	49.92
N/A	2:10 PM	425	N/A	11.4	5.15	61.6	187	3.47	N/A	N/A
N/A	2:15 PM	425	25.5	11.5	5.15	61.8	188	3.48	0.26	49.93

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Lamotte 2020we turbidity meter; SN No: 1810-0412. ORP meter; Oakton pH6+; SN No: 914549.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. No PID reading due to rain.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units standard units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU		uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	GM-75D2	Sample ID: GM-75D2
Sample Date:	6/2/2014	Duplicate:	REP060214	Other QC: N/A
Sample Time:	11:56 AM	Weather:	Sunny Hot 65 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	LaMotte 2020 we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	505.0 to 525.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	525 ft bmp	Pump Intake Depth:	Initial: 515 ft bmp Final: N/A	
Depth to Water:	34.92 ft bmp	Purge Time:	10:55 AM	to 11:55 AM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	24.25 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:55 AM	N/A	N/A	20.7	5.56	70.5	213	3.15	0.77	N/A
N/A	11:00 AM	350	N/A	21.2	5.08	74.1	219	4.33	N/A	34.95
N/A	11:05 AM	350	N/A	21.9	5.07	75	224	4.18	N/A	N/A
N/A	11:10 AM	350	N/A	21.9	5.07	74.9	224	4.82	0.82	34.94
N/A	11:15 AM	350	N/A	22	5.09	75.1	226	4.83	N/A	N/A
N/A	11:20 AM	350	N/A	22.1	5.08	75.2	228	4.76	N/A	34.89
N/A	11:25 AM	375	N/A	22	5.1	75000	228	4.82	0.3	N/A
N/A	11:30 AM	375	N/A	22	5.1	74.8	228	4.28	N/A	34.9
N/A	11:35 AM	375	N/A	22.2	5.11	74.7	228	4.69	N/A	N/A
N/A	11:40 AM	375	N/A	22.2	5.12	74.9	226	4.6	0.21	34.91
N/A	11:45 AM	375	N/A	22.4	5.13	75	224	4.76	N/A	N/A
N/A	11:50 AM	375	N/A	22.5	5.15	75	220	4.62	N/A	34.87
N/A	11:55 AM	375	24.25	22.6	5.15	74.8	216	4.65	0.25	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Rate lowered prior to sampling.

Comments

General Comments: N/A
 Sampling Remarks: Dedicated Transducer down well. Total volume purged = 22,000 + 2,250 = 24,250 mL = 24.25 L.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mS/cm	millisiemens per centimeter	N/A	not available	ppm	parts per million
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	L	liters							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-78S	Sample ID: GM-78S
Sample Date: 5/15/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 2:58 PM	Weather: Cloudy Humid Sunny 65 F	

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter: Lamotte 2020we; SN: 1810-0412
Measuring Point: TOC	Serial #: 855320	
Casing Material: PVC sch 40	Screen Interval: 60.0 to 70.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 70 ft bmp	Pump Intake Depth: Initial: 60 ft bmp Final: N/A	
Depth to Water: 39.21 ft bmp	Purge Time: 2:25 PM to 2:55 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove: _____	
	= Total Volume to Remove: _____	
	Actual Volume Removed: 60 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:25 PM	2	N/A	16.4	6.02	781	N/A	N/A	9.46	39.91
N/A	2:35 PM	2	20	16.4	5.72	788	N/A	N/A	34.3	39.76
N/A	2:45 PM	2	40	16.4	5.7	779	N/A	N/A	4.88	39.76
N/A	2:55 PM	2	60	16.4	5.7	777	N/A	N/A	2.81	39.8

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Sampled for Total & Dissolved Cd/Cr. Dissolved sample field filtered with 0.45 micron Quick Filter.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. PID MiniRae 2000; SN: 110-011589.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing
CG	clear glass	gal	gallons	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	HCL	hydrochloric acid						

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-78I	Sample ID: GM-78I
Sample Date: 5/15/2014	Duplicate: N/A	Other QC: MS/MSD
Sample Time: 4:32 PM	Weather: Cloudy Humid Sunny 75 F	

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters: OAKTON 300 Series YSI 550A
Measuring Point: TOC	Serial #: 855320 12H101335
Casing Material: PVC sch 40	Screen Interval: 89.0 to 109.0 ft
Casing Diameter: 4 in	Packer Depth: N/A
PID Reading: 0.0 ppm	Packer Pressure: N/A
Measured Well Depth: 110 ft bmp	Pump Intake Depth: Initial: 100 ft bmp Final: N/A
Depth to Water: 39.50 ft bmp	Purge Time: 3:45 PM to 4:30 PM
Water Column in Well: _____	
Gallons in Well: _____	X Volumes to Remove: _____
	= Total Volume to Remove: _____
	Actual Volume Removed: 21 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:45 PM	200	N/A	17	5.73	693	118	5	1.05	N/A
N/A	3:50 PM	1000	N/A	18.1	5.72	698	115	4.61	0.76	39.55
N/A	3:55 PM	400	N/A	18.2	5.7	754	113	4.46	0.63	N/A
N/A	4:00 PM	400	N/A	18.7	5.72	748	115	4.27	0.55	39.54
N/A	4:05 PM	400	N/A	19.6	5.72	748	113	3.93	0.69	N/A
N/A	4:10 PM	400	N/A	19.9	5.72	764	114	3.99	0.58	39.54
N/A	4:15 PM	400	N/A	19.8	5.7	779	113	4.01	0.5	N/A
N/A	4:20 PM	400	N/A	19.8	5.7	787	111	4.07	0.4	39.54
N/A	4:25 PM	400	N/A	19.7	5.7	794	110	4.19	0.44	N/A
N/A	4:30 PM	400	21	19.7	5.7	793	112	4.03	0.4	39.53

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Sampled for Total and Dissolved Cd/Cr. Dissolved sample field filtered with 0.45 micron Quick Filter.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. PID MiniRae 2000; SN:110-011589. ORP Meter; Oakton pH6+; SN: 914549. Lamotte 2020we turbidity meter; SN: 1810-0412.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-79I	Sample ID: GM-79I
Sample Date: 5/14/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:18 PM	Weather: Scattered Showers Humid Cloudy 58 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 80	Screen Interval: 170.0 to 180.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 180 ft bmp	Pump Intake Depth: Initial: 175 ft bmp Final: N/A	
Depth to Water: 39.38 ft bmp	Purge Time: 3:15 PM	to 4:15 PM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove: _____	
	= Total Volume to Remove: _____	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:15 PM	N/A	N/A	14.7	6.6	78.7	132	8.27	N/A	39.38
N/A	3:20 PM	N/A	N/A	14.4	5.84	75	107	6.47	N/A	N/A
N/A	3:25 PM	N/A	N/A	14.1	5.74	74.3	102	6.8	N/A	39.37
N/A	3:30 PM	400	N/A	13.8	5.59	74.7	98	6.86	1.08	N/A
N/A	3:35 PM	400	N/A	13.8	5.61	74.8	95	7.18	N/A	39.35
N/A	3:40 PM	400	N/A	13.7	5.5	75.1	95	6.87	N/A	N/A
N/A	3:45 PM	400	N/A	13.7	5.5	74.8	96	6.8	N/A	39.38
N/A	3:50 PM	400	N/A	13.6	5.46	74.8	98	7.16	N/A	N/A
N/A	3:55 PM	400	N/A	13.7	5.46	73	103	7.2	N/A	39.38
N/A	4:00 PM	400	N/A	13.6	5.51	72	110	6.56	N/A	N/A
N/A	4:05 PM	400	N/A	13.6	5.61	71.1	112	6.53	N/A	39.36
N/A	4:10 PM	400	N/A	13.6	5.63	70.5	110	6.1	N/A	N/A
N/A	4:15 PM	400	24	13.6	5.65	69.4	108	6.3	1.08	39.35



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Lamotte 2020we turbidity meter; SN: 1810-0412. ORP Meter; Oakton pH6+; SN: 914549. PID MiniRae 2000; SN: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: GM-79D	Sample ID: GM-79D
Sample Date: 5/14/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 5:40 PM	Weather: Cloudy Scattered Showers Humid 58 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	YSI 550A
Measuring Point: TOC	Serial #: 855320	12H101335
Casing Material: PVC sch 80	Screen Interval: 280.0 to 290.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 290 ft bmp	Pump Intake Depth: Initial: 285 ft bmp Final: N/A	
Depth to Water: 40.68 ft bmp	Purge Time: 4:30 PM	to 5:30 PM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	4:30 PM	N/A	N/A	14.3	5.62	68.4	100	7.88	N/A	40.68
N/A	4:35 PM	N/A	N/A	14.4	5.42	66.7	88	8.34	N/A	N/A
N/A	4:40 PM	N/A	N/A	14.9	5.49	66.3	83	8.74	N/A	40.7
N/A	4:45 PM	N/A	N/A	14.9	5.53	66	82	9.29	1.95	N/A
N/A	4:50 PM	N/A	N/A	14.9	5.54	65.8	82	9.22	N/A	40.68
N/A	4:55 PM	N/A	N/A	14.7	5.5	65.7	81	9.09	N/A	N/A
N/A	5:00 PM	N/A	N/A	14.7	5.5	65.5	81	9.51	N/A	40.67
N/A	5:05 PM	N/A	N/A	14.5	5.46	65.4	82	9.16	N/A	N/A
N/A	5:10 PM	400	N/A	14.5	5.46	65.2	81	9.23	N/A	40.74
N/A	5:15 PM	400	N/A	14.1	5.38	65.3	80	8.51	N/A	N/A
N/A	5:20 PM	400	N/A	14.1	5.33	65.1	80	7.89	N/A	40.7
N/A	5:25 PM	400	N/A	14.1	5.33	65.2	82	8.28	N/A	N/A
N/A	5:30 PM	400	24	14.1	5.32	65	82	8.61	0.94	40.61



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Lamotte 2020we turbidity meter; SN: 1810-0412. ORP Meter; Oakon pH6+; SN: 914549. PID MiniRae 2000; SN: 110-011589.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: FW-03	Sample ID: FW-03
Sample Date: 5/19/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 2:00 PM	Weather: Sunny Windy 65 F	

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	LaMotte 2020we: 1810-0412
Casing Material: unknown	Screen Interval: 49.0 to 64.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 64 ft bmp	Pump Intake Depth: Initial: 59 ft bmp Final: ft bmp	
Depth to Water: 53.94 ft bmp	Purge Time: 1:46 PM to 1:58 PM	
Water Column in Well: 10 ft		
Gallons in Well: 1.6 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 5 gal	
	Actual Volume Removed: 5 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:46 PM	0.5	0	17.8	6.71	117.9	N/A	N/A	1142	54.12
1	1:50 PM	0.5	1.6	16.6	6.34	117.3	N/A	N/A	625	54.11
2	1:54 PM	0.5	3.2	16.4	6.27	117.8	N/A	N/A	150	54.11
3	1:58 PM	0.5	5	16.4	6.41	120.6	N/A	N/A	28.6	54.11

Collected Sample Condition

Color: yellow-brown **Odor:** none **Appearance:** cloudy

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: See Instrument Calibration Log for addtl. water quality instrument details. Note: first 2 turbidity readings in "AU" units. Rate lowered prior to sampling.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** HN-24I **Sample ID:** HN-24I
Sample Date: 5/19/2014 **Duplicate:** REP051914 **Other QC:** Equipment Blank
Sample Time: 12:35 PM **Weather:** Sunny|Hot 65 F

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump **Water Quality Meters:** OAKTON 300 Series Turbidity Meter
Measuring Point: TOC **Serial #:** 855320 LaMotte 2020we: 1810-0412
Casing Material: PVC sch 40 **Screen Interval:** 148.0 to 158.0 ft
Casing Diameter: 4 in **Packer Depth:** N/A
PID Reading: 0.0 ppm **Packer Pressure:** N/A
Measured Well Depth: 158 ft bmp **Pump Intake Depth:** Initial: 152 ft bmp Final: 153 ft bmp
Depth to Water: 50.50 ft bmp **Purge Time:** 11:48 AM to 12:33 PM
Water Column in Well: _____
Gallons in Well: _____ X **Volumes to Remove:** _____
 = **Total Volume to Remove:** _____
Actual Volume Removed: 15.5 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:48 AM	N/A	N/A	17.3	6	182.7	177	5.5	12.15	N/A
N/A	11:53 AM	340	N/A	17.9	5.97	181.6	173	4.4	13.9	50.55
N/A	11:58 AM	340	N/A	17.8	6.05	181.4	151	2.8	19.5	N/A
N/A	12:03 PM	340	N/A	19.2	6.02	183.3	145	3.26	20.6	50.55
N/A	12:08 PM	340	N/A	19.7	6.02	179.7	137	3.41	31.9	N/A
N/A	12:13 PM	340	N/A	19.7	5.98	178.7	132	3.31	30	50.55
N/A	12:18 PM	340	N/A	19.8	5.98	178.1	126	3.4	23.8	N/A
N/A	12:23 PM	350	N/A	19.8	5.99	178.9	122	3.13	21.5	50.53
N/A	12:28 PM	350	N/A	20	5.99	179.2	119	3.1	18.4	N/A
N/A	12:33 PM	350	15.5	20.2	6	178.8	119	3.25	18.6	50.54

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: See Calibration Log for full WQ Instrument Details. Sampling occurred from 12:35-12:42. Flow rate slowed to laminar during sampling.

Technician: Karla Miranda|Patricia Prezorski

Signature: _____

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	HN-40S	Sample ID: HN-40S
Sample Date:	5/12/2014	Duplicate:	N/A	
Sample Time:	12:38 PM	Weather:	Humid Hot Sunny Cloudy 75 F	

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	Lamotte 2020we; SN: 1810-0412.
Casing Material:	PVC sch 40	Screen Interval:	49.0 to 59.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	59 ft bmp	Pump Intake Depth:	Initial: 54 ft bmp Final: N/A	
Depth to Water:	47.93 ft bmp	Purge Time:	12:12 PM	to 12:36 PM
Water Column in Well:	11.07 ft			
Gallons in Well:	7.195 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	22 gal	
		Actual Volume Removed:	22 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumulative Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:12 PM	1	N/A	19.5	5.29	192.5	N/A	N/A	5.39	48.09
1	12:20 PM	1	8	17.8	5.16	302	N/A	N/A	11.08	48.05
2	12:28 PM	1	16	17.9	5.18	298	N/A	N/A	9.03	48
3	12:36 PM	1	22	17.8	5.17	198.6	N/A	N/A	3.95	48

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	ppm	parts per million	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	mg/L	milligrams per liter	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	HN-40I	Sample ID: HN-40I
Sample Date:	5/12/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	11:32 AM	Weather:	Sunny Cloudy 75 F	

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	YSI 550A
Measuring Point:	TOC	Serial #:	855320	12H101335
Casing Material:	PVC sch 40	Screen Interval:	108.0 to 118.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	118 ft bmp	Pump Intake Depth:	Initial: 113 ft bmp Final: N/A	
Depth to Water:	47.71 ft bmp	Purge Time:	10:40 AM	to 11:30 AM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	19.4 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:40 AM	350	N/A	17.3	5.56	157.8	162	9.91	4.85	N/A
N/A	10:45 AM	350	N/A	18	5.51	160.1	153	9.73	N/A	47.77
N/A	10:50 AM	350	N/A	18.8	5.43	155.5	148	9.62	N/A	N/A
N/A	10:55 AM	350	N/A	19.3	5.42	154.3	143	9.76	N/A	47.73
N/A	11:00 AM	350	N/A	19.4	5.46	154.6	144	9.65	N/A	N/A
N/A	11:05 AM	350	N/A	19.4	5.46	154.1	160	9.78	N/A	47.74
N/A	11:10 AM	425	N/A	18.8	5.42	152.9	169	9.82	N/A	N/A
N/A	11:15 AM	425	N/A	18.8	5.33	152.2	171	9.82	13.03	47.72
N/A	11:20 AM	425	N/A	19.2	5.37	150.6	152	9.83	N/A	N/A
N/A	11:25 AM	425	N/A	19.1	5.27	150.5	141	7.88	N/A	47.7
N/A	11:30 AM	425	19.4	19	5.27	150.5	138	7.46	6.51	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN 110-011589. ORP meter; Oakton pH6+; SN: 914549. Lamotte 2020we turbidity meter; SN 1810-0412.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	HN-42S	Sample ID: HN-42S
Sample Date:	5/12/2014	Duplicate:	N/A	
Sample Time:	4:00 PM	Weather:	Cloudy Humid Sunny 75 F	

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	Lamotte 2020we; SN: 1810-0412.
Casing Material:	PVC sch 40	Screen Interval:	50.0 to 60.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	60 ft bmp	Pump Intake Depth:	Initial: 55 ft bmp Final: N/A	
Depth to Water:	50.18 ft bmp	Purge Time:	3:37 PM	to 3:58 PM
Water Column in Well:	9.82 ft			
Gallons in Well:	6.383 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	19.149 gal	
		Actual Volume Removed:	20 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumulative Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:37 PM	1	N/A	17.2	6.58	313	N/A	N/A	3.27	50.31
1	3:44 PM	1	7	16.7	6.01	320	N/A	N/A	4.54	50.33
2	3:51 PM	1	14	16.9	5.62	324	N/A	N/A	1.14	50.33
3	3:58 PM	1	20	16.9	5.65	325	N/A	N/A	0.75	50.3

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	PID MiniRae 2000; SN : 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	HN-42I	Sample ID: HN-42I
Sample Date:	5/12/2014	Duplicate:	N/A	
Sample Time:	3:12 PM	Weather:	Humid Sunny Cloudy 75 F	

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	YSI 550A
Measuring Point:	TOC	Serial #:	855320	12H101335
Casing Material:	PVC sch 40	Screen Interval:	100.0 to 110.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	110 ft bmp	Pump Intake Depth:	Initial: 105 ft bmp Final: N/A	
Depth to Water:	49.52 ft bmp	Purge Time:	2:25 PM	to 3:10 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	22.5 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:25 PM	850	N/A	19.7	11.78	1055	1	7.21	5.13	N/A
N/A	2:30 PM	600	N/A	17.4	11.68	1029	74	4.82	N/A	N/A
N/A	2:35 PM	400	N/A	17.6	11.61	1028	79	4.56	N/A	49.68
N/A	2:40 PM	500	N/A	18.7	11.63	996	109	5.7	N/A	N/A
N/A	2:45 PM	500	N/A	19.1	11.59	946	117	5.47	N/A	49.66
N/A	2:50 PM	500	N/A	19.2	11.63	915	120	5.39	N/A	N/A
N/A	2:55 PM	500	N/A	19.3	11.64	903	125	5.45	N/A	49.65
N/A	3:00 PM	500	N/A	19.5	11.66	892	125	5.42	N/A	N/A
N/A	3:05 PM	500	N/A	19.6	11.66	865	122	5.46	N/A	49.6
N/A	3:10 PM	550	22.5	19.5	11.66	834	124	5.5	4.39	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Lamotte 2020we turbidity meter; SN 1810-0412. PID MiniRae 2000; SN 110-011589. ORP meter;Oakton pH6+; SN: 914549.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: _____

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.GWMI2	Well ID:	N-10624	Sample ID: N-10624
Sample Date:	6/2/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	3:24 PM	Weather:	Hot Sunny 70 F	

Purge Method:	Non-Dedicated Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	LaMotte 2020 we: 1810-0412
Casing Material:	unknown	Screen Interval:	190.0 to 194.0 ft	
Casing Diameter:	2 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	194 ft bmp	Pump Intake Depth:	Initial: N/A Final: 192 ft bmp	
Depth to Water:	28.44 ft bmp	Purge Time:	2:16 PM to 3:21 PM	
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	31.38 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:16 PM	N/A	N/A	20.7	9.07	391	9	3.94	54.5	N/A
N/A	2:21 PM	525	N/A	19.7	9.08	361	30	1.34	N/A	36.42
N/A	2:26 PM	525	N/A	19.2	9.19	430	90	0.25	N/A	N/A
N/A	2:31 PM	475	N/A	19.8	8.91	419	190	0.18	48	40.46
N/A	2:36 PM	475	N/A	19.8	8.59	408	260	0.15	N/A	N/A
N/A	2:41 PM	475	N/A	19.3	8.57	397	278	0.13	N/A	45.61
N/A	2:46 PM	475	N/A	19.5	8.94	410	255	0.14	747	N/A
N/A	2:51 PM	475	N/A	19.8	9.01	404	100	0.56	N/A	48.6
N/A	2:56 PM	475	N/A	19.7	9.04	421	118	0.24	N/A	N/A
N/A	3:01 PM	475	N/A	19.5	9.01	415	127	0.26	N/A	50.49
N/A	3:06 PM	475	N/A	19.5	9	402	119	0.37	N/A	N/A
N/A	3:11 PM	475	N/A	19.5	8.91	391	113	0.44	N/A	47.48
N/A	3:16 PM	475	N/A	19.5	8.86	384	90	0.53	N/A	N/A
N/A	3:21 PM	475	31.38	19.4	8.84	372	85	0.65	78.9	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: yellow-brown Odor: none Appearance: cloudy

Parameter **Container** **# of Containers** **Preservative** **Comments**

Comments

General Comments: N/A
 Sampling Remarks: Excessive drawdown due to poor screen transmissivity. Final turbidity reading taken from well head. ORP Valves for Parameters #2-14 are negative values. Turbidity for parameter #7 is in "AU" units.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: N-10627	Sample ID: N-10627
Sample Date: 6/2/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 1:40 PM	Weather: Hot Sunny 70 F	

Purge Method: Non-Dedicated Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	LaMotte 2020 we: 1810-0412
Casing Material: unknown	Screen Interval: 290.0 to 295.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 295 ft bmp	Pump Intake Depth: Initial: 292.5 ft bmp Final: N/A	
Depth to Water: 30.83 ft bmp	Purge Time: 12:37 PM to 1:37 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove: _____ = Total Volume to Remove: _____ Actual Volume Removed: 30 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:37 PM	N/A	N/A	17.9	9.41	79.5	96	4.21	19.6	31.86
N/A	12:42 PM	500	N/A	18.6	10.03	82.2	40	1.04	N/A	N/A
N/A	12:47 PM	500	N/A	20.9	11.42	85.9	104	0.04	2000	33.53
N/A	12:52 PM	500	N/A	21	11.49	85.5	99	0.02	1128	N/A
N/A	12:57 PM	500	N/A	20.9	11.53	86.9	95	0.05	N/A	33.43
N/A	1:02 PM	500	N/A	19.5	11.42	71.9	53	1.07	N/A	N/A
N/A	1:07 PM	500	N/A	18.7	11.4	80.3	62	0.59	21	34.82
N/A	1:12 PM	500	N/A	18.3	11.21	81.3	22	0.62	N/A	N/A
N/A	1:17 PM	500	N/A	19.7	11.12	83.9	18	0.58	N/A	34.07
N/A	1:22 PM	500	N/A	19.9	11.13	83.9	20	0.69	16.7	N/A
N/A	1:27 PM	500	N/A	19.8	11.2	87.7	25	0.9	N/A	33.79
N/A	1:32 PM	500	N/A	19.8	11.27	85.9	25	0.84	N/A	N/A
N/A	1:37 PM	500	30	19.8	11.21	84.1	24	0.86	19.7	33.71

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	Rate slowed during purging. Total volume purged = 30,000+3, 500=33,500 ml= 33.5 L~ 8.4 gal.

Comments

General Comments: N/A
 Sampling Remarks: Final Turbidity reading taken at well head.
 Color for parameters # 6-9 was translucent grey. Turbidity value in parameter #4 had "AU" units. ORP Values for parameters #2-13 were negative values.

Technician: Karla Miranda|Patricia Prezorski



Signature: _____

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.GWMI2 **Well ID:** N-10631 **Sample ID:** N-10631
Sample Date: 5/15/2014 **Duplicate:** N/A **Other QC:** Equipment Blank
Sample Time: 11:26 AM **Weather:** Cloudy|Humid|Scattered Showers|Windy 60 F

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	unknown	Screen Interval:	63.0 to 67.0 ft	
Casing Diameter:	2 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	67 ft bmp	Pump Intake Depth:	Initial: 63 ft bmp Final: N/A	
Depth to Water:	36.68 ft bmp	Purge Time:	11:09 AM	to 11:24 AM
Water Column in Well:	30.32 ft			
Gallons in Well:	4.8512 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	15 gal	
		Actual Volume Removed:	15 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:09 AM	1	N/A	16.4	9.77	139.7	N/A	N/A	21.1	N/A
1	11:14 AM	1	5	16.4	7.53	115.4	N/A	N/A	5.47	42.39
2	11:19 AM	1	10	16.4	6.74	112.4	N/A	N/A	4.1	42.43
3	11:24 AM	1	15	16.5	6.49	111.4	N/A	N/A	6.93	42.34

Collected Sample Condition

Color: brown **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A
Total Cr/Cd (EPA 6010)	250 mL PE	1	HNO3	N/A
Dissolved Cr/Cd (EPA 6010)	250 mL PE	1	HNO3	Field filtered with 0.45 micron Quick Filter.

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. PID MiniRae2000; SN: 110-011589.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	PE	polyethylene	SU	standard units
CG	clear glass	ft bmp	feet below measuring point	HNO3	nitric acid	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	gal	gallons							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.GWMI2	Well ID: MW-3-1	Sample ID: MW-3-1
Sample Date: 5/30/2014	Duplicate: N/A	Other QC: Equipment Blank
Sample Time: 6:07 PM	Weather: Humid Cloudy 70 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	2020we; SN: 1810-0412
Casing Material:	Screen Interval: N/A	
Casing Diameter:	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 501 ft bmp	Pump Intake Depth: Initial: 495 ft bmp Final: N/A	
Depth to Water: 54.90 ft bmp	Purge Time: 5:05 PM to 6:05 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 7.9 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	5:05 PM	N/A	N/A	18.6	5.77	122.3	97	2.57	8.47	N/A
N/A	5:10 PM	200	N/A	18.4	5.77	122.2	96	2.36	N/A	54.78
N/A	5:15 PM	N/A	N/A	17.8	5.77	121.9	94	2.14	N/A	N/A
N/A	5:20 PM	N/A	N/A	17.4	5.76	122	93	1.93	7.67	54.82
N/A	5:25 PM	N/A	N/A	17.1	5.74	121.7	93	1.76	N/A	N/A
N/A	5:30 PM	N/A	N/A	17	5.74	121.7	93	1.72	N/A	54.82
N/A	5:35 PM	N/A	N/A	16.9	5.74	121.5	93	1.72	4.74	N/A
N/A	5:40 PM	N/A	N/A	16.7	5.73	121	93	1.51	N/A	54.82
N/A	5:45 PM	N/A	4.5	16.6	5.73	120.8	92	1.21	N/A	N/A
N/A	5:50 PM	N/A	N/A	16.5	5.72	121	91	1.21	N/A	54.82
N/A	5:55 PM	N/A	N/A	16.4	5.72	121.3	90	1.17	4.71	N/A
N/A	6:00 PM	N/A	N/A	16.4	5.73	121	89	1.11	N/A	54.82
N/A	6:05 PM	N/A	7.9	16.3	5.73	120.7	89	1.08	4.86	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589. YSI 550A; SN: 12H101335. ORP meter; Oakton pH6+; SN: 914549.

Technician: Patricia Prezorski

Signature: _____



Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.NAVI2	Well ID: TT-101D	Sample ID: TT-101D
Sample Date: 5/27/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 1:26 PM	Weather: Hot Humid Sunny 75 F	

Purge Method: Other Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	LaMotte 2020 we: 1810-0410
Casing Material: PVC sch 80	Screen Interval: 325.0 to 345.0 ft	
Casing Diameter: 4 in	Packer Depth: 320 ft bls	
PID Reading: 0.2 ppm	Packer Pressure: N/A	
Measured Well Depth: 345 ft bmp	Pump Intake Depth: Initial: 335 ft bmp Final: N/A	
Depth to Water: 31.41 ft bmp	Purge Time: 12:24 PM to 1:24 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 0 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:24 PM	0	0	16.3	4.48	63	208	1.3	2.01	N/A
N/A	12:29 PM	700	N/A	16.3	4.27	64.2	206	0.85	N/A	31.49
N/A	12:34 PM	425	N/A	16.3	4.15	63.9	173	0.71	N/A	N/A
N/A	12:39 PM	425	N/A	16.6	4.23	63.9	32	0.63	12.19	31.49
N/A	12:44 PM	425	N/A	16.7	4.28	64.1	8	0.59	N/A	N/A
N/A	12:49 PM	425	N/A	16.7	4.32	64.3	25	0.6	N/A	31.41
N/A	12:54 PM	425	N/A	16.7	4.35	64.3	29	0.62	8.6	N/A
N/A	12:59 PM	425	N/A	16.7	4.35	64.3	28	0.62	N/A	31.44
N/A	1:04 PM	425	N/A	16.7	4.36	64.3	29	0.56	N/A	N/A
N/A	1:09 PM	425	N/A	16.7	4.37	64.3	26	0.53	6.43	31.41
N/A	1:14 PM	425	N/A	16.7	4.36	64.7	24	0.52	N/A	N/A
N/A	1:19 PM	425	N/A	16.7	4.38	64.2	26	0.5	N/A	31.41
N/A	1:24 PM	425	N/A	16.7	4.38	64.1	27	0.49	7.26	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Rate slowed to laminar during sampling. Total volume purged =26,875mL=27L ~6.75 gal. Total Purge Time: 1224-1328. Very humid.

Technician: Karla Miranda|Patricia Prezorski

Signature: _____



Abbreviations:

C	degrees Celsius	ft	feet	L	liters	mL/min	milliliters per minute	N/A	not available	ppm	parts per million
CG	clear glass	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	HCL	hydrochloric acid							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.NAVI2	Well ID: TT-101D1	Sample ID: TT-101D1
Sample Date: 5/27/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:08 PM	Weather: Hot Humid Sunny 75 F	

Purge Method: Other Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	LaMotte 2020 we: 1810-0410
Casing Material: PVC sch 80	Screen Interval: 570.0 to 590.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 590 ft bmp	Pump Intake Depth: Initial: 580 ft bmp Final: N/A	
Depth to Water: 33.43 ft bmp	Purge Time: 3:07 PM to 4:07 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 22.5 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:07 PM	N/A	N/A	16	5.01	61.2	74	3.93	5.39	N/A
N/A	3:12 AM	550	N/A	15.7	4.89	64.4	62	2.93	N/A	33.38
N/A	3:17 PM	350	N/A	15.7	4.83	64.8	57	2.17	N/A	N/A
N/A	3:22 PM	350	N/A	15.8	4.81	65.2	55	2.09	2.86	33.36
N/A	3:27 PM	350	N/A	15.8	4.81	65.4	53	1.92	N/A	N/A
N/A	3:32 PM	350	N/A	15.7	4.77	65.9	53	1.95	N/A	33.36
N/A	3:37 PM	350	N/A	15.7	4.74	66.5	53	1.98	6.02	N/A
N/A	3:42 PM	350	N/A	15.7	4.74	67.6	52	1.97	N/A	33.35
N/A	3:47 PM	350	N/A	15.7	4.75	68	53	1.83	N/A	N/A
N/A	3:52 PM	375	N/A	15.7	4.75	68.3	53	1.79	6.72	33.32
N/A	3:57 PM	375	N/A	15.7	4.72	68.3	53	1.64	N/A	N/A
N/A	4:02 PM	375	N/A	15.8	4.74	68.2	52	1.47	N/A	33.31
N/A	4:07 PM	375	22.5	15.8	4.74	68.2	51	1.24	7.62	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Rate slowed to laminar during sampling. Total volume purged =22,500mL=22.5L ~6 gal. Total Purge Time: 1507-1611.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.NAVI2	Well ID:	TT-101D2	Sample ID: TT-101D2
Sample Date:	5/27/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	2:47 PM	Weather:	Sunny Hot Humid 75 F	

Purge Method:	Other Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	LaMotte 2020 we: 1810-0410
Casing Material:	PVC sch 80	Screen Interval:	740.0 to 760.0 ft	
Casing Diameter:	4 in	Packer Depth:	500 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	760 ft bmp	Pump Intake Depth:	Initial: 750 ft bmp Final: N/A	
Depth to Water:	34.01 ft bmp	Purge Time:	1:45 PM	to 2:45 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	29.4 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:45 PM	N/A	N/A	16.7	4.86	30.7	60	5.18	4.78	N/A
N/A	1:50 PM	475	N/A	16.7	4.89	29.8	50	4.63	N/A	34.08
N/A	1:55 PM	475	N/A	16.7	4.86	29.2	50	4.4	N/A	N/A
N/A	2:00 PM	475	N/A	16.7	4.83	28.6	52	4.64	5.01	34.23
N/A	2:05 PM	475	N/A	16.6	4.83	28.5	53	4.62	N/A	N/A
N/A	2:10 PM	475	N/A	16.6	4.8	28.1	55	4.91	N/A	34.1
N/A	2:15 PM	500	N/A	16.5	4.76	27.9	58	5.12	4.14	N/A
N/A	2:20 PM	500	N/A	16.5	4.76	27.9	61	5.29	N/A	34.08
N/A	2:25 PM	500	N/A	16.5	4.75	28.4	63	5.76	N/A	N/A
N/A	2:30 PM	500	N/A	16.5	4.74	29	65	5.72	6.03	34.08
N/A	2:35 PM	500	N/A	16.4	4.73	29.2	66	5.74	N/A	N/A
N/A	2:40 PM	500	N/A	16.4	4.73	29.1	66	5.93	N/A	34.09
N/A	2:45 PM	500	29.4	16.3	4.74	29	67	5.77	7.89	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (OLM 4.3)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Rate slowed to laminar during sampling. Total volume purged =29,375mL=29.4L ~7.5 gal. Total Purge Time: 1345-1445.

Technician: Karla Miranda|Patricia Prezorski

Signature: _____



Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.NAVI2	Well ID:	TT-102D	Sample ID: TT-102D
Sample Date:	5/29/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	10:46 AM	Weather:	Sunny 60 F	

Purge Method:	Other Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	LaMotte 2020 we: 1810-0410
Casing Material:	PVC sch 80	Screen Interval:	560.0 to 600.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.2 ppm	Packer Pressure:	N/A	
Measured Well Depth:	618 ft bmp	Pump Intake Depth:	Initial: 580 ft bmp Final: N/A	
Depth to Water:	19.76 ft bmp	Purge Time:	9:40 AM	to 10:45 AM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	23.3 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	9:40 AM	N/A	N/A	14.1	4	110.5	188	5.91	1.41	N/A
N/A	9:45 AM	375	N/A	14	4.07	108.3	183	4.87	N/A	21.18
N/A	9:50 AM	375	N/A	14	4.14	107.6	222	4.5	N/A	N/A
N/A	9:55 AM	350	N/A	14	4.32	107	223	3.97	2.16	21.22
N/A	10:00 AM	350	N/A	14	4.58	106.8	231	3.77	N/A	N/A
N/A	10:05 AM	350	N/A	14	4.72	106.5	218	3.61	N/A	21.24
N/A	10:10 AM	350	N/A	14.1	5.02	105300	169	3.36	1.34	N/A
N/A	10:15 AM	N/A	N/A	14.2	5.02	104.2	155	3.27	N/A	20.94
N/A	10:20 AM	350	N/A	14.2	4.98	103600	152	3.18	N/A	N/A
N/A	10:25 AM	350	N/A	14.2	4.96	103	149	3.07	1.45	20.77
N/A	10:30 AM	350	N/A	14.2	4.97	102.8	147	3.07	N/A	N/A
N/A	10:35 AM	350	N/A	14.3	4.95	102.2	139	2.83	N/A	20.82
N/A	10:40 AM	350	N/A	14.4	4.97	101.8	138	2.77	3.04	N/A
N/A	10:45 AM	350	23.3	14.4	4.97	102.5	140	2.63	N/A	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Rate slowed to laminar during sampling. Total volume purged = 23,300 + 2,150 = 25,450 mL = 25.45 L ~ 6.3 gal. Total Purge Time: 0940-1051.

Technician: Karla Miranda|Patricia Prezorski

Signature: _____



Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mS/cm	millisiemens per centimeter	N/A	not available	ppm	parts per million
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	L	liters							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.NAVI2	Well ID: TT-102D2	Sample ID: TT-102D2
Sample Date: 5/29/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:06 PM	Weather: Sunny 60 F	

Purge Method: Other Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	LaMotte 2020 we: 1810-0410
Casing Material: PVC sch 80	Screen Interval: 740.0 to 770.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 790 ft bmp	Pump Intake Depth: Initial: 755 ft bmp Final: N/A	
Depth to Water: 15.31 ft bmp	Purge Time: 11:03 AM to 12:03 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 22.3 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:03 AM	N/A	N/A	15.3	5.73	46.6	117	4.2	3.44	N/A
N/A	11:08 AM	300	N/A	15.1	5.69	45.2	113	3.68	N/A	15.45
N/A	11:13 AM	300	N/A	15.3	5.54	30.7	109	2.51	N/A	N/A
N/A	11:18 AM	300	N/A	15.3	5.52	28.2	108	2.43	2.56	15.52
N/A	11:23 AM	300	N/A	15.5	5.42	22.3	106	2.27	N/A	N/A
N/A	11:28 AM	275	N/A	15.3	5.43	21.2	106	2.16	2.75	15.58
N/A	11:33 AM	275	N/A	15.3	5.39	20.1	105	2.07	N/A	N/A
N/A	11:38 AM	275	N/A	15.7	5.37	18.7	105	1.95	N/A	15.58
N/A	11:43 AM	275	N/A	15.8	5.37	18.5	104	1.94	3.08	N/A
N/A	11:48 AM	250	N/A	15.9	5.33	18.1	104	2.05	N/A	15.58
N/A	11:53 AM	450	N/A	15.9	5.33	18	104	2.22	N/A	N/A
N/A	11:58 AM	425	N/A	15.5	5.28	17.9	102	2.58	3.45	15.58
N/A	12:03 PM	425	22.3	15.5	5.27	17.9	102	2.6	4.81	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Rate slowed to laminar during sampling. Total volume purged = 19,250 + 2,975 = 22,225 mL = 22.3L ~5.6 gal. Total Purge Time: 1103-1210.

Technician: Karla Miranda|Patricia Prezorski

Signature: _____

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0312.NAVI2 **Well ID:** BPOW 1-1 **Sample ID:** BPOW 1-1
Sample Date: 4/17/2014 **Duplicate:** N/A **Other QC:** MS/MSD
Sample Time: 3:13 PM **Weather:** Cloudy 53 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	PVC sch 80	Screen Interval:	196.0 to 241.0 ft	
Casing Diameter:	4 in	Packer Depth:	169 ft bls	
PID Reading:	0.1 ppm	Packer Pressure:	120 psi	
Measured Well Depth:	241 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	28.70 ft bmp	Purge Time:	2:47 PM	to 3:11 PM
Water Column in Well:	72 ft			
Gallons in Well:	46.80 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	140.4 gal	
		Actual Volume Removed:	140.4 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:47 PM	N/A	N/A	12.8	5.41	67.1	N/A	N/A	0.86	28.82
1	2:54 PM	6.68	46.8	12.2	5.43	65.4	N/A	N/A	0.48	28.81
2	3:02 PM	5.8	93.6	12.2	5.44	65.4	N/A	N/A	1.78	28.82
3	3:11 PM	5.2	140.4	12.1	5.45	65.6	N/A	N/A	2.1	28.83

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Parameter every 46.80 gallons-measured in 55-gal drums.

Comments

General Comments: N/A
 Sampling Remarks: Pump intake just below packer. Rate lowered prior to sampling. PID MiniRae 2000; SN No. 110-011589.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0312.NAVI2 **Well ID:** BPOW 1-2 **Sample ID:** BPOW 1-2
Sample Date: 4/17/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 2:10 PM **Weather:** Cloudy 53 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	PVC sch 80	Screen Interval:	310.0 to 335.0 ft	
Casing Diameter:	4 in	Packer Depth:	295 ft bls	
PID Reading:	0.2 ppm	Packer Pressure:	165 psi	
Measured Well Depth:	335 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	29.41 ft bmp	Purge Time:	1:53 PM	to 2:08 PM
Water Column in Well:	41 ft			
Gallons in Well:	26.65 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	80 gal	
		Actual Volume Removed:	80 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:53 PM	N/A	N/A	12.7	4.8	63.6	N/A	N/A	2.65	29.15
1	1:57 PM	6.66	26.65	11.7	5.29	79.6	N/A	N/A	2.11	29.31
2	2:01 PM	6.66	53.3	11.3	5.04	71.5	N/A	N/A	1.26	29.58
3	2:08 PM	3.8	80	11.5	4.97	68.1	N/A	N/A	2.35	29.78

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Pump intake just below packer. Rate lowered prior to sampling. Well purged & sampled with BPOW 1-1 dedicated tubing.

Technician: Patricia Prezorski



Signature: _____

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0312.NAVI2	Well ID: BPOW 1-3	Sample ID: BPOW 1-3
Sample Date: 4/17/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:24 PM	Weather: Cold Sunny 59 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	1810-0412
Casing Material: PVC sch 80	Screen Interval: 374.0 to 419.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 419 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 30.98 ft bmp	Purge Time: 10:41 AM	to 12:23 PM
Water Column in Well: 388.02 ft		
Gallons in Well: 62.08 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 186.24 gal	
	Actual Volume Removed: 186.24 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumil Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:41 AM	N/A	N/A	11.7	3.56	94.8	N/A	N/A	13.8	30.64
1	11:15 AM	1.8	62.1	11.7	4.05	98.1	N/A	N/A	0.37	30.31
2	11:47 AM	1.8	124.2	11.7	4.13	94.6	N/A	N/A	0.29	30.15
3	12:23 PM	1.7	186.24	11.5	4.23	91.6	N/A	N/A	0.3	30.08

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Dedicated rediflow pump. Pump lifted 30 feet prior to purging. Pump set 4-5 ft above screen zone. Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0312.NAVI2	Well ID:	BPOW 1-4	Sample ID: BPOW 1-4
Sample Date:	4/16/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	10:57 AM	Weather:	Cold Sunny 45 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series LaMotte 2020
Measuring Point:	TOC	Serial #:	855320 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	340.0 to 400.0 ft
Casing Diameter:	4 in	Packer Depth:	330 ft bls
PID Reading:	0.0 ppm	Packer Pressure:	187 psi
Measured Well Depth:	405 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A
Depth to Water:	12.60 ft bmp	Purge Time:	10:43 AM to 10:57 AM
Water Column in Well:	75 ft		
Gallons in Well:	48.75 gal	X Volumes to Remove:	3
		= Total Volume to Remove:	146.25 gal
		Actual Volume Removed:	146.25 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:43 AM	N/A	N/A	10.5	4.85	79.3	N/A	N/A	1.03	13.71
1	10:48 AM	9.6	48.75	10.5	4.75	64.2	N/A	N/A	0.89	13.73
2	10:53 AM	9.6	97.5	10.8	4.43	61.8	N/A	N/A	0.34	13.33
3	10:57 AM	5	146.25	11	4.35	62.3	N/A	N/A	0.58	13.3

Collected Sample Condition

Color: colorless **Odor:** moderate **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Purge rate lowered prior to sampling. Pump intake just below packer. Transducer in well - hanging in DTW port.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0312.NAVI2	Well ID:	BPOW 1-5	Sample ID: BPOW 1-5
Sample Date:	4/16/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	2:23 PM	Weather:	Cold Sunny 50 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series LaMotte 2020
Measuring Point:	TOC	Serial #:	855320 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	600.0 to 650.0 ft
Casing Diameter:	4 in	Packer Depth:	490 ft bls
PID Reading:	0.0 ppm	Packer Pressure:	255 psi
Measured Well Depth:	655 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A
Depth to Water:	13.24 ft bmp	Purge Time:	1:30 PM to 2:22 PM
Water Column in Well:	165 ft		
Gallons in Well:	107.25 gal	X Volumes to Remove:	3
		= Total Volume to Remove:	321.75 gal
		Actual Volume Removed:	322 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:30 PM	N/A	N/A	12	5.74	14.8	N/A	N/A	2.8	13.51
1	1:42 PM	8.9	107.3	11.4	6.07	17.2	N/A	N/A	0.75	13.48
2	2:00 PM	6	214.6	12.5	5.79	15.8	N/A	N/A	3.99	13.48
3	2:22 PM	4.8	322	12.1	5.69	15.8	N/A	N/A	2.91	13.48

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling. Pump intake just below packer. Transducer in well - hanging in DTW port.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.0314.NAVI2	Well ID:	BPOW 1-6	Sample ID: BPOW 1-6
Sample Date:	4/18/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	11:56 AM	Weather:	Cold Cloudy 50 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series LaMotte 2020
Measuring Point:	TOC	Serial #:	855320 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	700.0 to 750.0 ft
Casing Diameter:	4 in	Packer Depth:	500 ft bls
PID Reading:	0.0 ppm	Packer Pressure:	260 psi
Measured Well Depth:	755 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A
Depth to Water:	13.10 ft bmp	Purge Time:	10:00 AM to 11:54 AM
Water Column in Well:	255 ft		
Gallons in Well:	165.75 gal	X Volumes to Remove:	3
		= Total Volume to Remove:	497.25 gal
		Actual Volume Removed:	497.25 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:00 AM	N/A	N/A	11.1	5.71	33	N/A	N/A	0.98	12.9
1	10:13 AM	9	165.75	11.4	5.3	87.2	N/A	N/A	5.06	12.82
2	11:30 AM	9	331.5	11.6	5.92	16.8	N/A	N/A	3.12	12.47
3	11:54 AM	N/A	497.25	11.9	5.62	15.8	N/A	N/A	1.88	12.32

Collected Sample Condition

Color: colorless **Odor:** moderate **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Pump intake just below packer. Purge start flow rate 18 gpm, rate adjusted to 9 gpm; prior to sampling rate lowered to approx. 3 gpm. Parameter every 166 gallons measured in 55-gal drums. Transducer in well- hanging in open DTW port.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.NAVI2	Well ID: BPOW 2-1	Sample ID: BPOW 2-1
Sample Date: 4/22/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 5:22 PM	Weather: Cloudy 62 F	

Purge Method: Dedicated 2" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	1810-0412
Casing Material: PVC sch 80	Screen Interval: 360.0 to 400.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 400 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 20.03 ft bmp	Purge Time: 3:56 PM	to 5:20 PM
Water Column in Well: 380 ft		
Gallons in Well: 60.80 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 182.4 gal	
	Actual Volume Removed: 182.4 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:56 PM	N/A	N/A	14.1	4.78	47.4	N/A	N/A	0.96	20.25
1	4:31 PM	2.2	60.8	13.1	4.6	52	N/A	N/A	1.12	20.25
2	4:51 PM	2.2	121.6	13	4.57	51.5	N/A	N/A	0.4	20.28
3	5:20 PM	2.2	182.4	12.9	4.66	50.7	N/A	N/A	0.47	20.08

Collected Sample Condition

Color: colorless **Odor:** moderate **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Dedicated rediflow pump. Pump pulled up 25 feet to set pump 5 feet above screen. Parameter every 60.8 gallons. Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0314.NAVI2 **Well ID:** BPOW 2-2 **Sample ID:** BPOW 2-2
Sample Date: 4/23/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 1:08 PM **Weather:** Cloudy 60 F

Purge Method: Dedicated 2" Sub. Pump **Water Quality Meters:** OAKTON 300 Series LaMotte 2020
Measuring Point: TOC **Serial #:** 855320 1810-0412
Casing Material: PVC sch 80 **Screen Interval:** 455.0 to 495.0 ft
Casing Diameter: 2 in **Packer Depth:** N/A
PID Reading: 0.0 ppm **Packer Pressure:** N/A
Measured Well Depth: 495 ft bmp **Pump Intake Depth:** Initial: 90 ft bmp Final: ft bmp
Depth to Water: 22.81 ft bmp **Purge Time:** 11:32 AM to 1:06 PM
Water Column in Well: 472.19 ft
Gallons in Well: 75.55 gal X **Volumes to Remove:** 3
 = **Total Volume to Remove:** 226.65 gal
Actual Volume Removed: 226.65 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumulative Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:32 AM	N/A	N/A	14.5	5.11	68.9	N/A	N/A	0.6	23.86
1	11:58 AM	2.75	75.55	12.7	4.49	64.9	N/A	N/A	0.38	23.75
2	12:27 PM	2.75	151.1	12.5	4.55	67	N/A	N/A	0.29	23.83
3	1:06 PM	N/A	226.65	12.7	4.57	67.1	N/A	N/A	0.51	23.82

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Transducer in well. Non-dedicated rediflow pump & new tubing used to purge/sample well. Transducer removed from well at 1103; returned at 1322. Start purge rate 3 gpm, rate lowered to 2.5 - 2.75 gpm. Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0312.NAVI2	Well ID: BPOW 2-3	Sample ID: BPOW 2-3
Sample Date: 4/23/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:23 PM	Weather: Cloudy 58 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	1810-0412
Casing Material: PVC sch 80	Screen Interval: 564.0 to 594.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 257 psi	
Measured Well Depth: 599 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 22.49 ft bmp	Purge Time: 2:40 PM	to 3:22 PM
Water Column in Well: 99 ft		
Gallons in Well: 64.35 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 193.05 gal	
	Actual Volume Removed: 195 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:40 PM	N/A	N/A	14.7	5.07	44.1	N/A	N/A	0.59	22.48
1	2:53 PM	5	65	12.6	5.26	44	N/A	N/A	0.47	22.44
2	3:08 PM	5	130	12.3	5.22	44	N/A	N/A	0.39	22.44
3	3:22 PM	N/A	195	12.5	5.21	44	N/A	N/A	0.46	22.44

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Transducer in well. Dedicated pipe & tubing used with new tubing for sample port. Pump intake just below packer. Purge rate 5 gpm. Rate lowered prior to sampling. Parameter every 64.7 gallons - measured in 55 gal drums.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0312.NAVI2	Well ID: BPOW 3-1	Sample ID: BPOW 3-1
Sample Date: 4/15/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:38 PM	Weather: Raining 55 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	1810-0412
Casing Material: PVC sch 80	Screen Interval: 446.0 to 516.0 ft	
Casing Diameter: 4 in	Packer Depth: 414 ft bls	
PID Reading: N/A	Packer Pressure: 220 psi	
Measured Well Depth: 516 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 25.13 ft bmp	Purge Time: 11:49 AM	to 12:35 PM
Water Column in Well: 102 ft		
Gallons in Well: 66.30 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 198.9 gal	
	Actual Volume Removed: 220 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:49 AM	N/A	N/A	13.9	4.11	130.1	N/A	N/A	0.18	29.27
1	12:05 PM	4.58	73.3	12.9	3.87	121.1	N/A	N/A	0.92	29.72
2	12:19 PM	5.2	146.6	12.7	3.95	119.6	N/A	N/A	0.21	29.72
3	12:35 PM	4.58	220	13.1	3.99	118.5	N/A	N/A	0.42	26.84

Collected Sample Condition

Color: colorless **Odor:** moderate **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Rain- no PID. Rate lowered prior to sampling.
 Pump intake just below packer.

Technician: Patricia Prezorski

Steph P. Schwarz
Signature: *Pat Prezorski*

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.0312.NAVI2 **Well ID:** BPOW 3-2 **Sample ID:** BPOW 3-2
Sample Date: 4/15/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 4:24 PM **Weather:** Scattered Showers 55 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855320	1810-0412
Casing Material:	PVC sch 80	Screen Interval:	612.0 to 647.0 ft	
Casing Diameter:	4 in	Packer Depth:	503 ft bls	
PID Reading:	N/A	Packer Pressure:	255 psi	
Measured Well Depth:	647 ft bmp	Pump Intake Depth:	Initial: ft bmp Final: N/A	
Depth to Water:	26.75 ft bmp	Purge Time:	2:53 PM	to 4:20 PM
Water Column in Well:	144 ft			
Gallons in Well:	93.60 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	280.80 gal	
		Actual Volume Removed:	281 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:53 PM	N/A	N/A	14.1	4.75	55.6	N/A	N/A	0.65	27.16
1	3:08 PM	6.24	93.6	12.6	4.82	152.2	N/A	N/A	17.6	26.35
2	3:23 PM	6.24	187.2	12.6	4.94	92.5	N/A	N/A	13.2	25.7
3	4:20 PM	5	281	13	5.11	65.8	N/A	N/A	21.7	24.4

Collected Sample Condition

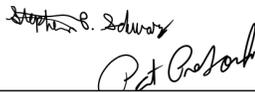
Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: No PID - raining. Rate lowered prior to sampling. Pump just below packer.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.NAVI2	Well ID: BPOW 3-3	Sample ID: BPOW 3-3
Sample Date: 4/18/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:56 PM	Weather: Cloudy 55 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	1810-0412
Casing Material: PVC sch 80	Screen Interval: 580.0 to 620.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: 0 ppm	Packer Pressure: 255 psi	
Measured Well Depth: 625 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 22.88 ft bmp	Purge Time: 3:05 PM	to 3:54 PM
Water Column in Well: 125 ft		
Gallons in Well: 81.25 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 243.75 gal	
	Actual Volume Removed: 243.75 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cumulative Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:05 PM	N/A	N/A	13.9	5.47	43.8	N/A	N/A	0.52	23.17
1	3:17 PM	6.8	81.25	12.1	5.54	48.4	N/A	N/A	0.38	23.1
2	3:28 PM	7	162.5	12	5.43	48.5	N/A	N/A	0.45	23.1
3	3:54 PM	3.1	243.75	12.1	5.38	47.6	N/A	N/A	0.39	23.05

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589.

Comments

General Comments: N/A
 Sampling Remarks: Transducer in well-hanging in open DTW port. Rate lowered prior to sampling. Pump intake just below packer. Parameter every 81.3 gallons- measured in 55-gal drums. Sampling of well set up that dedicated tubing for BPOW 3-4 must be used.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.0314.NAVI2	Well ID: BPOW 3-4	Sample ID: BPOW 3-4
Sample Date: 4/22/2014	Duplicate: REP042214	Other QC: N/A
Sample Time: 1:20 PM	Weather: Sunny 63 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855320	1810-0412
Casing Material: PVC sch 80	Screen Interval: 640.0 to 690.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: 0 ppm	Packer Pressure: 250 psi	
Measured Well Depth: 695 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 24.13 ft bmp	Purge Time: 11:30 AM	to 1:18 PM
Water Column in Well: 205 ft		
Gallons in Well: 133.25 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 399.75 gal	
	Actual Volume Removed: 400 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:30 AM	N/A	N/A	13.7	5.66	47.4	N/A	N/A	2.58	24.12
1	11:48 AM	7.8	133.25	12.6	5.26	34.2	N/A	N/A	3.3	24.11
2	12:59 PM	7.8	266.5	13.8	5.41	33.7	N/A	N/A	7.79	24.11
3	1:18 PM	N/A	400	12.9	4.06	32.8	N/A	N/A	4.06	24.09

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN No: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Transducer in well. Pump intake just below packer. Rate lowered prior to sampling. Parameter every 133.3 gallons - measured in 55 gal drums.

Technician: Patricia Prezorski

Patricia Prezorski
Signature: _____

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.NAVI2 **Well ID:** BPOW 1-1 **Sample ID:** BPOW 1-1
Sample Date: 8/4/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 3:08 PM **Weather:** Hot|Humid|Sunny 76 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	110-011589	Lamotte 2020we; SN: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	196.0 to 241.0 ft	
Casing Diameter:	4 in	Packer Depth:	169 ft bls	
PID Reading:	3.3 ppm	Packer Pressure:	110.00 psi	
Measured Well Depth:	241 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	30.20 ft bmp	Purge Time:	2:41 PM	to 3:07 PM
Water Column in Well:	72.00 ft			
Gallons in Well:	46.80 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	140.00 gal	
		Actual Volume Removed:	140 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	2:41 PM	N/A	0.0	16.80	4.98	71	N/A	N/A	1.20	30.50
1	2:50 PM	22710	47.0	13.90	4.43	81	N/A	N/A	1.21	30.50
2	2:59 PM	20818	93.0	13.30	4.42	81	N/A	N/A	3.85	30.48
3	3:07 PM	15140	140.0	13.00	4.42	80	N/A	N/A	4.26	30.30

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: Suggest new wellhead electrical plug. Packer depth at 169 ft bmp. Pump set just below packer.
 Sampling Remarks: Rate lowered before 2V & 3V. High humidity reading on PID at wellhead. Dedicated post/tubing used. New 1/2" poly tubing on sample port.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 1-2	Sample ID: BPOW 1-2
Sample Date: 8/6/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:45 PM	Weather: Humid Hot Cloudy Sunny 72 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter: Lamotte 2020we; SN: 1810-0412
Measuring Point: TOC	Serial #: 855320	
Casing Material: PVC sch 80	Screen Interval: 310.0 to 335.0 ft	
Casing Diameter: 4 in	Packer Depth: 295 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 165.00 psi	
Measured Well Depth: 335 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 33.17 ft bmp	Purge Time: 3:22 PM to 3:45 PM	
Water Column in Well: 40.00 ft		
Gallons in Well: 26.00 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 78.00 gal	
	Actual Volume Removed: 78 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	3:22 PM	15140	0.0	17.60	5.01	83	N/A	N/A	0.87	34.42
1	3:30 PM	15140	26.0	12.70	4.79	82	N/A	N/A	1.21	35.22
2	3:37 PM	15140	52.0	12.50	4.27	76	N/A	N/A	1.99	35.16
3	3:45 PM	7570	78.0	12.80	4.24	75	N/A	N/A	1.22	35.54

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589

Comments

General Comments: N/A
 Sampling Remarks: Pump intake just below packer. Rate lowered prior to sampling.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 1-3	Sample ID: BPOW 1-3
Sample Date: 8/6/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 1:26 PM	Weather: Hot Humid Sunny Cloudy 72 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: N/A	Serial #: 855320	Lamotte 2020we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 374.0 to 419.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 3.6 ppm	Packer Pressure: N/A	
Measured Well Depth: 419 ft bmp	Pump Intake Depth: Initial: 369 ft bmp Final: N/A	
Depth to Water: 33.70 ft bmp	Purge Time: 11:24 AM to 1:23 PM	
Water Column in Well: 385.30 ft		
Gallons in Well: 61.60 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 185.00 gal	
	Actual Volume Removed: 185 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	11:24 AM	5678	0.0	14.40	4.91	100	N/A	N/A	1.16	33.90
1	12:10 PM	5678	62.0	14.00	3.43	106	N/A	N/A	0.71	33.93
2	12:45 PM	5678	124.0	13.40	3.43	107	N/A	N/A	0.59	33.93
3	1:23 PM	5678	185.0	13.50	3.39	109	N/A	N/A	0.34	33.93

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589

Comments

General Comments: Pull up well tubing approx 28 ft to set dedicated rediflow pump approx 5 ft above screen.
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Karla Miranda|Patricia Prezorski

Signature: 


Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 1-4	Sample ID: BPOW 1-4
Sample Date: 8/19/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:58 PM	Weather: Humid Cloudy Hot Sunny 74 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Lamotte 2020 we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 340.0 to 400.0 ft	
Casing Diameter: 4 in	Packer Depth: 330 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 190.00 psi	
Measured Well Depth: 405 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 13.68 ft bmp	Purge Time: 3:30 PM	to 3:55 PM
Water Column in Well: 75.00 ft		
Gallons in Well: 48.75 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 147.00 gal	
	Actual Volume Removed: 147 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	3:30 PM	N/A	0.0	15.90	5.71	64	N/A	N/A	0.45	14.16
1	3:38 PM	23656	49.0	12.40	4.47	64	N/A	N/A	1.74	14.21
2	3:46 PM	23656	98.0	11.90	3.97	64	N/A	N/A	2.15	14.21
3	3:55 PM	23656	147.0	12.10	3.79	64	N/A	N/A	1.29	14.16

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pump intake just below packer.

Comments

General Comments: Transducer in well.
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589. Rate lowered prior to sampling - after 3V.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 1-5	Sample ID: BPOW 1-5
Sample Date: 8/19/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 1:48 PM	Weather: Sunny Humid Hot 75 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Lamotte 2020 we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 600.0 to 650.0 ft	
Casing Diameter: 4 in	Packer Depth: 490 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 255.00 psi	
Measured Well Depth: 655 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 14.62 ft bmp	Purge Time: 11:55 AM to 1:44 PM	
Water Column in Well: 165.00 ft		
Gallons in Well: 107.25 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 322.00 gal	
	Actual Volume Removed: 322 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	11:55 AM	N/A	0.0	13.40	6.61	32	N/A	N/A	2.12	14.92
1	12:08 PM	29523	108.0	12.20	5.51	17	N/A	N/A	1.77	14.88
2	12:21 PM	29523	216.0	12.20	5.06	16	N/A	N/A	5.08	14.88
3	1:44 PM	29523	322.0	13.00	6.09	16	N/A	N/A	3.63	14.88

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pump intake just below packer. Rate lowered prior to sampling - after 3V.

Comments

General Comments: Transducer in well.
 Sampling Remarks: PID MiniRae 2000; SN:110-011589. Parameter every 108 gals measured in 55-gal drums.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 1-6	Sample ID: BPOW 1-6
Sample Date: 8/20/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:14 PM	Weather: Sunny Cloudy Humid 76 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Lamotte 2020 we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 700.0 to 750.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 255.00 psi	
Measured Well Depth: 755 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 15.02 ft bmp	Purge Time: 12:36 PM	to 4:09 PM
Water Column in Well: 265.00 ft		
Gallons in Well: 172.25 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 517.00 gal	
	Actual Volume Removed: 517 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	12:36 PM	N/A	0.0	17.70	5.94	26	N/A	N/A	0.67	15.18
1	1:12 PM	18925	173.0	12.60	4.41	18	N/A	N/A	6.47	15.31
2	2:44 PM	18925	346.0	13.00	5.82	15	N/A	N/A	1.76	15.32
3	4:09 PM	18925	517.0	13.10	6.03	17	N/A	N/A	2.06	15.38

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pump intake just below packer. Rate lowered prior to sampling - after 3V.

Comments

General Comments: Transducer in well hanging in open DTW port. Parameter every 173 gals measured in 55-gal drums.
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 2-1	Sample ID: BPOW 2-1
Sample Date: 8/11/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:09 PM	Weather: Hot Humid Sunny 80 F	

Purge Method: Dedicated 2" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 360.0 to 400.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 400 ft bmp	Pump Intake Depth: Initial: 355 ft bmp Final: N/A	
Depth to Water: 22.61 ft bmp	Purge Time: 2:48 PM to 4:06 PM	
Water Column in Well: 377.39 ft		
Gallons in Well: 60.40 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 182.00 gal	
	Actual Volume Removed: 182 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	2:48 PM	7570	0.0	16.50	5.66	52	N/A	N/A	0.39	22.84
1	3:16 PM	7570	61.0	14.30	3.82	55	N/A	N/A	2.06	22.90
2	3:44 PM	7570	122.0	14.20	3.80	53	N/A	N/A	0.49	22.87
3	4:06 PM	7570	182.0	14.60	3.88	60	N/A	N/A	1.06	22.88

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	See Instrument Calibration Log for additional WQ/ equipment specifications.

Comments

General Comments: Dedicated Transducer in/down well; remained in well during purge.
 Sampling Remarks: Pump was pulled up approx. 25 ft to ~5ft above top of screen; therefore, pump set @ ~355 ft bmp for purge. Rate lowered prior to sampling.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.NAVI2	Well ID:	BPOW 2-2	Sample ID: BPOW 2-2
Sample Date:	8/11/2014	Duplicate:	N/A	
Sample Time:	1:12 PM	Weather:	Sunny Hot 76 F	

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855322	La Motte 2020 we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	455.0 to 495.0 ft	
Casing Diameter:	2 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	495 ft bmp	Pump Intake Depth:	Initial: 99 ft bmp Final: N/A	
Depth to Water:	22.31 ft bmp	Purge Time:	11:56 AM to 1:09 PM	
Water Column in Well:	472.69 ft			
Gallons in Well:	75.63 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	227.00 gal	
		Actual Volume Removed:	228 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	11:56 AM	11355	0.0	16.40	4.92	54	N/A	N/A	1.14	25.94
1	12:17 PM	13248	76.0	13.70	3.98	63	N/A	N/A	0.49	26.20
2	12:45 PM	8138	152.0	13.70	3.73	64	N/A	N/A	0.86	25.78
3	1:09 PM	8138	228.0	13.80	3.75	64	N/A	N/A	0.80	25.95

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Non-dedicated rediflow pump (with new 1/2" poly tubing) set at 99 ft below TOC.

Comments

General Comments: Transducer in well removed at 1128; returned at 1326.
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.NAVI2	Well ID:	BPOW 2-3	Sample ID: BPOW 2-3
Sample Date:	8/8/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	1:47 PM	Weather:	Sunny Hot 76 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	LaMotte 2020we; SN: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	564.0 to 594.0 ft	
Casing Diameter:	4 in	Packer Depth:	500 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	255.00 psi	
Measured Well Depth:	599 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	24.45 ft bmp	Purge Time:	1:01 PM	to 1:46 PM
Water Column in Well:	99.00 ft			
Gallons in Well:	64.35 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	194.00 gal	
		Actual Volume Removed:	194 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	1:01 PM	14005	0.0	15.80	6.04	49	N/A	N/A	0.55	22.02
1	1:22 PM	17033	65.0	13.20	4.69	45	N/A	N/A	0.46	22.04
2	1:34 PM	17411	130.0	13.00	4.36	45	N/A	N/A	0.55	22.04
3	1:46 PM	13248	194.0	13.80	4.43	45	N/A	N/A	0.43	21.89

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN 110-011589

Comments

General Comments: Transducer hanging in open DTW port
 Sampling Remarks: Pump intake just below packer. Rate lowered prior to sampling.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.NAVI2 **Well ID:** BPOW 3-1 **Sample ID:** BPOW 3-1
Sample Date: 8/8/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 5:13 PM **Weather:** Hot|Humid|Sunny 80 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855322	LaMotte 2020 we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	446.0 to 516.0 ft	
Casing Diameter:	4 in	Packer Depth:	414 ft bls	
PID Reading:	2.7 ppm	Packer Pressure:	220.00 psi	
Measured Well Depth:	516 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	28.66 ft bmp	Purge Time:	4:28 PM	to 5:12 PM
Water Column in Well:	102.00 ft			
Gallons in Well:	66.30 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	198.90 gal	
		Actual Volume Removed:	199 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	4:04 PM	13248	0.0	17.40	4.71	125	N/A	N/A	0.33	29.83
1	4:46 PM	15140	66.0	14.10	3.68	123	N/A	N/A	0.56	33.37
2	4:57 PM	18925	133.0	13.70	3.59	126	N/A	N/A	0.75	33.34
3	5:12 PM	9463	199.0	13.50	3.62	125	N/A	N/A	0.24	30.18

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589

Comments

General Comments: Rate lowered prior to sampling. Slight odor at 1635 - purge water 30 -50 gals mark.
 Sampling Remarks: Pump intake just below packer

Technician: Patricia Prezorski|Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.NAVI2	Well ID:	BPOW 3-2	Sample ID: BPOW 3-2
Sample Date:	8/18/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	1:42 PM	Weather:	Humid Sunny 72 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series Turbidity Meter
Measuring Point:	TOC	Serial #:	855320 Lamotte 2020we; SN: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	612.0 to 647.0 ft
Casing Diameter:	4 in	Packer Depth:	503 ft bls
PID Reading:	10.7 ppm	Packer Pressure:	255.00 psi
Measured Well Depth:	647 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A
Depth to Water:	29.98 ft bmp	Purge Time:	11:39 AM to 1:35 PM
Water Column in Well:	144.00 ft		
Gallons in Well:	93.60 gal	X Volumes to Remove:	3
		= Total Volume to Remove:	281.00 gal
		Actual Volume Removed:	281 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	11:39 AM	N/A	0.0	17.20	6.21	76	N/A	N/A	5.58	30.20
1	11:54 AM	22710	94.0	13.80	4.65	91	N/A	N/A	11.84	29.00
2	12:07 PM	22710	188.0	13.40	4.49	66	N/A	N/A	6.30	28.11
3	1:35 PM	22710	281.0	14.00	5.49	58	N/A	N/A	6.21	25.82

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pump intake just below packer. Rate lowered prior to sampling (after 3V). PID MiniRae 2000; SN: 110-011589.

Comments

General Comments: Transducer in well hanging in open DTW port. Parameter every 94 gals measured in 55-gal drums.
 Sampling Remarks: PID reading approx. 3 " above wellhead = 0 ppm.

Technician: Karla Miranda|Patricia Prezorski

Signature:



Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.NAVI2 **Well ID:** BPOW 3-3 **Sample ID:** BPOW 3-3
Sample Date: 8/12/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 12:39 PM **Weather:** Hot|Humid|Cloudy 80 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	Lamotte 2020we; SN: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	580.0 to 620.0 ft	
Casing Diameter:	4 in	Packer Depth:	500 ft bls	
PID Reading:	1.4 ppm	Packer Pressure:	255.00 psi	
Measured Well Depth:	625 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	26.43 ft bmp	Purge Time:	10:47 AM	to 12:37 PM
Water Column in Well:	135.00 ft			
Gallons in Well:	87.75 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	264.00 gal	
		Actual Volume Removed:	264 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	10:47 AM	26495	0.0	16.10	6.16	54	N/A	N/A	0.42	26.58
1	10:58 AM	26495	88.0	13.20	4.76	48	N/A	N/A	0.69	26.84
2	11:07 AM	26495	176.0	12.70	4.55	50	N/A	N/A	0.62	26.88
3	12:37 PM	26495	264.0	13.30	5.60	48	N/A	N/A	0.90	26.62

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000 SN: 110-011589

Comments

General Comments: Transducer in well. Dedicated post for BPOW 3-4 used for purge. New 1/2" poly tubing placed on sample port. Sampling Remarks: Rate lowered prior to sampling - after 3V. Pump intake just below packer.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.NAVI2	Well ID:	BPOW 3-4	Sample ID: BPOW 3-4
Sample Date:	8/12/2014	Duplicate:	REP081214KM1	Other QC: MS/MSD
Sample Time:	3:48 PM	Weather:	Hot Humid Cloudy Scattered Showers 75 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series Turbidity Meter
Measuring Point:	TOC	Serial #:	855320 Lamotte 2020we; SN: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	640.0 to 690.0 ft
Casing Diameter:	4 in	Packer Depth:	500 ft bls
PID Reading:	0.0 ppm	Packer Pressure:	250.00 psi
Measured Well Depth:	695 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A
Depth to Water:	28.32 ft bmp	Purge Time:	1:43 PM to 3:37 PM
Water Column in Well:	205.00 ft		
Gallons in Well:	133.25 gal	X Volumes to Remove:	3
		= Total Volume to Remove:	400.00 gal
		Actual Volume Removed:	400 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (mL/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (uS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	1:43 PM	18925	0.0	16.10	5.25	32	N/A	N/A	0.78	28.12
1	2:00 PM	34065	134.0	13.40	4.60	35	N/A	N/A	4.06	28.25
2	3:21 PM	34065	267.0	13.00	5.82	34	N/A	N/A	6.91	28.25
3	3:37 PM	34065	400.0	14.10	4.58	33	N/A	N/A	3.68	28.10

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	PID MiniRae 2000; SN: 110-011589

Comments

General Comments: Transducer in well down open DTW port. New 1/2 " poly tubing on dedicated post sample port.
 Sampling Remarks: Pump intake just below packer. Rate lowered prior to sampling - after 3V.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: MW-01GF	Sample ID: MW-01GF
Sample Date: 10/16/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 6:38 PM	Weather: Cloudy Humid 65 F	

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters: Turbidity Meter	N/A
Measuring Point: TOC	Serial #: Lamotte 2020we; SN: 1810-0412	N/A
Casing Material: unknown	Screen Interval: 48.0 to 58.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 58 ft bmp	Pump Intake Depth: Initial: 53 ft bmp Final: N/A	
Depth to Water: 43.71 ft bmp	Purge Time: 5:53 PM to 6:37 PM	
Water Column in Well: 14.29 ft		
Gallons in Well: 9.30 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 28.00 gal	
	Actual Volume Removed: 30 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	5:53 PM	1.000	N/A	17.03	5.10	0.158	N/A	N/A	5.50	43.69
1	6:17 PM	1.000	10.0	16.77	4.97	0.156	N/A	N/A	7.44	43.70
2	6:27 PM	1.000	20.0	16.80	5.11	0.159	N/A	N/A	2.10	43.71
3	6:37 PM	1.000	30.0	16.81	5.14	0.161	N/A	N/A	1.17	43.71

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
Total Cd/Cr (EPA 6010)	500 mL PE	1	HNO3	N/A
Dissolved Cd/Cr (EPA 6010)	500 mL PE	1	HNO3	YSI 556 MPS; SN: 10K101390

Comments

General Comments: N/A
 Sampling Remarks: Rate lowered prior to sampling.

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mS/cm	millisiemens per centimeter	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	gal	gallons	N/A	not available	PE	polyethylene	SU	standard units		
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.GWMI2 **Well ID:** MW-02GF **Sample ID:** MW-02GF
Sample Date: 10/20/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 4:13 PM **Weather:** Windy|Cloudy|Sunny 60 F

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump **Water Quality Meters:** OAKTON 300 Series LaMotte 2020
Measuring Point: TOC **Serial #:** 855322 LaMotte 2020 we: 1810-0412
Casing Material: unknown **Screen Interval:** 49.0 to 59.0 ft
Casing Diameter: 4 in **Packer Depth:** N/A
PID Reading: 0.0 ppm **Packer Pressure:** N/A
Measured Well Depth: 59 ft bmp **Pump Intake Depth:** Initial: 49 ft bmp Final: 44.02 ft bmp
Depth to Water: 43.95 ft bmp **Purge Time:** 3:41 PM to 4:11 PM
Water Column in Well: 15.05 ft
Gallons in Well: 9.80 gal **Volumes to Remove:** 3
Total Volume to Remove: 29.30 gal
Actual Volume Removed: 30 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	3:41 PM	1.000	N/A	16.40	7.05	685.000	N/A	N/A	7.23	44.05
1	3:51 PM	1.000	10.0	16.20	6.92	0.958	N/A	N/A	28.20	44.02
2	4:01 PM	1.000	20.0	16.10	6.98	0.967	N/A	N/A	12.08	44.02
3	4:11 PM	1.000	30.0	16.20	7.05	945.000	N/A	N/A	2.54	44.02

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
Total Cd/Cr (EPA 6010)	250 mL PE	1	HNO3	N/A
Dissolved Cd/Cr (EPA 6010)	250 mL PE	1	HNO3	Field filtered with 0.45 micron Quick Filter.

Comments

General Comments: Pump set at top of screen (49 ft bls).
 Sampling Remarks: Sampling Time: 16:13-16:17.

Technician: Karla Miranda|Kirk Vargas

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mS/cm	millisiemens per centimeter	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	gal	gallons	N/A	not available	PE	polyethylene	SU	standard units	uS/cm	microsiemens per centimeter
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.GWMI2 **Well ID:** PLT1 MW-04 **Sample ID:** PLT1 MW-04
Sample Date: 10/16/2014 **Duplicate:** N/A **Other QC:** Equipment Blank
Sample Time: 3:31 PM **Weather:** Cloudy|Raining|Scattered Showers 65 F

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump **Water Quality Meters:** YSI LaMotte 2020
Measuring Point: TOC **Serial #:** YSI 556 MPS: (Serial # 10K 101390) LaMotte 2020 we: 1810-0412
Casing Material: unknown **Screen Interval:** 41.5 to 56.5 ft
Casing Diameter: 2 in **Packer Depth:** N/A
PID Reading: 1.4 ppm **Packer Pressure:** N/A
Measured Well Depth: 56.5 ft bmp **Pump Intake Depth:** Initial: 49.0 ft bmp Final: N/A
Depth to Water: 43.08 ft bmp **Purge Time:** 3:20 PM to 3:29 PM
Water Column in Well: 13.42 ft
Gallons in Well: 2.15 gal **Volumes to Remove:** 3
Total Volume to Remove: 6.50 gal
Actual Volume Removed: 9 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	3:20 PM	1.000	0.0	20.47	6.11	0.003	N/A	N/A	19.10	42.51
1	3:23 PM	1.000	3.0	18.55	6.16	0.004	N/A	N/A	25.30	42.51
2	3:26 PM	1.000	6.0	17.29	6.30	0.002	N/A	N/A	5.25	42.51
3	3:29 PM	1.000	9.0	16.29	6.30	0.002	N/A	N/A	1.72	42.50

Collected Sample Condition

Color: yellow-brown **Odor:** none **Appearance:** cloudy

Parameter	Container	# of Containers	Preservative	Comments
Total Cr (EPA 6010)	500 mL PE	1	HNO3	N/A
Dissovled Cr (EPA 6010)	500 mL PE	1	HNO3	N/A

Comments

General Comments: N/A
 Sampling Remarks: "Yellow-brown" color = slight/pale grayish-brown tinge.

Technician: Karla Miranda|Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mS/cm	millisiemens per centimeter	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	gal	gallons	N/A	not available	PE	polyethylene	SU	standard units		
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.GWMI2 **Well ID:** PLT1 MW-05 **Sample ID:** PLT1 MW-05
Sample Date: 10/16/2014 **Duplicate:** N/A **Other QC:** MS/MSD
Sample Time: 4:53 PM **Weather:** Cloudy|Humid|Raining|Scattered Showers 65 F

Purge Method:	Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters:	YSI	LaMotte 2020
Measuring Point:	TOC	Serial #:	YSI 556 MSP (Serial #:10K101390)	LaMotte 2020 we: 1810-0412
Casing Material:	unknown	Screen Interval:	38.0 to 58.0 ft	
Casing Diameter:	2 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	58 ft bmp	Pump Intake Depth:	Initial: 48 ft bmp Final: N/A	
Depth to Water:	42.46 ft bmp	Purge Time:	4:42 PM	to 4:51 PM
Water Column in Well:	15.54 ft			
Gallons in Well:	2.49 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	7.50 gal	
		Actual Volume Removed:	9 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	4:42 PM	1.000	0.0	19.18	6.65	0.004	N/A	N/A	15.30	35.60
1	4:45 PM	1.000	3.0	18.43	6.63	0.004	N/A	N/A	15.10	35.51
2	4:48 PM	1.000	6.0	17.46	6.51	0.003	N/A	N/A	13.60	35.12
3	4:51 PM	1.000	9.0	17.07	6.36	0.003	N/A	N/A	3.76	35.10

Collected Sample Condition

Color: yellow-brown **Odor:** none **Appearance:** cloudy

Parameter	Container	# of Containers	Preservative	Comments
Total Cr (EPA 6010)	500 mL PE	1	HNO3	N/A
Dissovled Cr (EPA 6010)	500 mL PE	1	HNO3	N/A

Comments

General Comments: N/A
 Sampling Remarks: Cumulative Volume purged: 9 gal. "Yellow-brown" color = slight/pale grayish-brown tinge.

Technician: Karla Miranda|Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mS/cm	millisiemens per centimeter	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	gal	gallons	N/A	not available	PE	polyethylene	SU	standard units		
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: PLT1 MW-06	Sample ID: PLT1 MW-06
Sample Date: 10/16/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:17 PM	Weather: Cloudy Humid 65 F	

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump	Water Quality Meters: YSI Turbidity Meter	
Measuring Point: TOC	Serial #: YSI 556 MSP (Serial # 10K 101390)	LaMotte 2020 we: 1810-0412
Casing Material: unknown	Screen Interval: 47.0 to 62.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 1.2 ppm	Packer Pressure: N/A	
Measured Well Depth: 62 ft bmp	Pump Intake Depth: Initial: 54.5 ft bmp Final: N/A	
Depth to Water: 45.17 ft bmp	Purge Time: 4:06 PM to 4:15 PM	
Water Column in Well: 16.83 ft		
Gallons in Well: 2.70 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 8.00 gal	
	Actual Volume Removed: 9 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	4:06 PM	1.000	0.0	18.92	6.61	0.006	N/A	N/A	9.23	43.78
1	4:09 PM	1.000	3.0	18.08	6.50	0.002	N/A	N/A	3.24	43.67
2	4:12 PM	1.000	6.0	17.78	6.52	0.002	N/A	N/A	7.13	43.78
3	4:15 PM	1.000	9.0	17.63	6.52	0.003	N/A	N/A	2.52	43.71

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
Total Cr (EPA 6010)	500 mL PE	1	HNO3	N/A
Dissovled Cr (EPA 6010)	500 mL PE	1	HNO3	N/A

Comments

General Comments: Tubing compromised; needs to be replaced. Pump pulled up 7.5 ft to mid screen.
 Sampling Remarks: Cumulative Volume purged: 9 gal

Technician: Karla Miranda|Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mS/cm	millisiemens per centimeter	NTU	nephelometric turbidity units	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	gal	gallons	N/A	not available	PE	polyethylene	SU	standard units		
ft	feet	HNO3	nitric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.GWMI2 **Well ID:** GM-15S **Sample ID:** GM-15S
Sample Date: 10/20/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 1:46 PM **Weather:** Cloudy 56 F

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump **Water Quality Meters:** YSI N/A
Measuring Point: TOC **Serial #:** YSI 556 MSP, Serial #10K101390. N/A
Casing Material: PVC sch 40 **Screen Interval:** 70.0 to 80.0 ft
Casing Diameter: 4 in **Packer Depth:** N/A
PID Reading: 0.0 ppm **Packer Pressure:** N/A
Measured Well Depth: N/A **Pump Intake Depth:** Initial: 70 ft bmp Final: ft bmp
Depth to Water: 45.09 ft bmp **Purge Time:** 1:10 PM to 1:46 PM
Water Column in Well: 34.91 ft
Gallons in Well: 22.70 gal **X Volumes to Remove:** 3
= Total Volume to Remove: 69.00 gal
Actual Volume Removed: 72 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	1:10 PM	N/A	N/A	15.83	5.82	0.442	N/A	N/A	2.89	45.41
1	1:22 PM	2.000	24.0	16.05	5.75	0.464	N/A	N/A	N/A	45.42
2	1:34 PM	2.000	48.0	16.14	5.72	0.478	N/A	N/A	0.87	45.42
3	1:46 PM	2.000	72.0	16.15	5.71	0.490	N/A	N/A	0.77	45.42

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
Dissovled Cr (EPA 6010)	250 mL PE	1	HNO3	Field Filtered with 0.45 micron Quick filter.
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: N/A

Technician: Kirk Vargas|Patricia Prezorski

Signature:



Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	mS/cm	millisiemens per centimeter	NTU	nephelometric turbidity units	ppm	parts per million
CG	clear glass	ft bmp	feet below measuring point	HNO3	nitric acid	N/A	not available	PE	polyethylene	SU	standard units
F	degrees Fahrenheit	gal	gallons							TOC	top of casing

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-15I	Sample ID: GM-15I
Sample Date: 10/20/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:16 PM	Weather: Cloudy Sunny 55 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: YSI	N/A
Measuring Point: TOC	Serial #: YSI 556 MSP, Serial #: 10K 101390	N/A
Casing Material: unknown	Screen Interval: 95.0 to 105.0 ft	
Casing Diameter: 4 in	Packer Depth: 94 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 75.00 psi	
Measured Well Depth: 105 ft bmp	Pump Intake Depth: Initial: ft bmp Final: ft bmp	
Depth to Water: 44.94 ft bmp	Purge Time: 12:11 AM to 11:44 AM	
Water Column in Well: 11.00 ft		
Gallons in Well: 7.15 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 22.00 gal	
	Actual Volume Removed: 22 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	10:15 AM	N/A	N/A	15.62	5.92	0.454	203.70	N/A	2.90	39.65
1	11:07 AM	N/A	N/A	15.68	5.77	0.422	192.90	N/A	1.58	39.56
2	11:44 AM	N/A	N/A	15.72	5.81	0.408	196.30	N/A	1.59	39.40
3	10:15 AM	N/A	22.0	15.60	5.77	0.425	206.30	N/A	0.68	44.63

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: Standard formula for PSI employed.
 Sampling Remarks: Pump sits just below packer, ~95 ft bls.

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	mV	millivolts	NTU	nephelometric turbidity units	psi	pounds per square inch
CG	clear glass	ft bmp	feet below measuring point	mS/cm	millisiemens per centimeter	N/A	not available	ppm	parts per million	SU	standard units
F	degrees Fahrenheit	gal	gallons							TOC	top of casing



Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.GWMI2	Well ID:	GM-15D	Sample ID: GM-15D
Sample Date:	10/20/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	1:20 PM	Weather:	Cloudy Sunny 55 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855322	LaMotte 2020 we: 1810-0412
Casing Material:	PVC sch 40	Screen Interval:	332.0 to 342.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.2 ppm	Packer Pressure:	N/A	
Measured Well Depth:	342 ft bmp	Pump Intake Depth:	Initial: 347 ft bmp Final: N/A	
Depth to Water:	47.43 ft bmp	Purge Time:	12:13 PM	to 1:13 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	2.5 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:13 PM	0.000	0.0	15.90	4.67	0.075	284.00	5.80	0.73	47.42
N/A	12:18 PM	0.132	0.0	16.10	4.54	0.086	294.00	2.24	N/A	N/A
N/A	12:23 PM	0.132	0.0	16.10	4.48	0.117	301.00	4.06	N/A	47.41
N/A	12:28 PM	0.132	0.0	16.10	4.38	0.116	304.00	5.06	0.29	N/A
N/A	12:33 PM	0.132	0.0	16.00	4.35	0.122	306.00	5.76	N/A	47.43
N/A	12:38 PM	0.132	0.0	16.10	4.39	0.132	306.00	5.68	N/A	N/A
N/A	12:43 PM	0.132	0.0	16.10	4.37	0.135	306.00	5.74	N/A	47.72
N/A	12:48 PM	0.132	0.0	16.10	4.40	0.138	306.00	5.71	N/A	N/A
N/A	12:53 PM	0.132	0.0	15.90	4.40	0.141	305.00	5.74	0.29	47.41
N/A	12:58 PM	0.132	0.0	15.90	4.40	0.144	305.00	5.85	N/A	N/A
N/A	1:03 PM	0.132	0.0	16.10	4.41	0.146	305.00	5.85	N/A	47.42
N/A	1:08 PM	0.132	0.0	16.10	4.43	0.148	304.00	6.00	N/A	N/A
N/A	1:13 PM	0.132	0.7	16.00	4.43	0.150	304.00	5.97	0.19	47.43



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Cumulative Volume Purged: 30,000 mL=30L~7.5gal. Sampling Time: 1320-1323.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.GWMI2	Well ID:	GM-15D2	Sample ID: GM-15D2
Sample Date:	10/20/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	11:45 AM	Weather:	Cold Sunny 50 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855322	La Motte 2020 we. 1810-0412
Casing Material:	PVC sch 40	Screen Interval:	536.0 to 556.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.4 ppm	Packer Pressure:	N/A	
Measured Well Depth:	556 ft bmp	Pump Intake Depth:	Initial: 546 ft bmp Final: N/A	
Depth to Water:	49.94 ft bmp	Purge Time:	10:35 AM	to 11:35 AM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	30 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:35 AM	0.000	0.0	13.50	4.80	0.003	290.00	3.78	5.49	49.96
N/A	10:40 AM	0.132	0.7	15.20	4.51	0.043	289.00	2.18	N/A	N/A
N/A	10:45 AM	0.132	1.3	15.20	4.48	0.047	292.00	3.70	N/A	49.95
N/A	10:50 AM	0.132	2.0	15.40	4.46	0.055	295.00	4.76	N/A	N/A
N/A	10:55 AM	0.132	2.6	15.50	4.46	0.057	295.00	4.99	N/A	49.97
N/A	11:00 AM	0.132	3.3	15.50	4.42	0.061	296.00	5.20	1.09	N/A
N/A	11:05 AM	0.132	4.0	15.50	4.42	0.062	296.00	5.05	N/A	49.94
N/A	11:10 AM	0.132	4.6	15.50	4.42	0.064	294.00	5.29	N/A	N/A
N/A	11:15 AM	0.132	5.3	15.40	4.42	0.065	295.00	5.29	N/A	49.96
N/A	11:20 AM	0.132	5.9	15.50	4.42	0.066	294.00	5.26	0.33	N/A
N/A	11:25 AM	0.132	6.6	15.50	4.43	0.066	293.00	5.28	N/A	49.95
N/A	11:30 AM	0.132	7.3	15.60	4.49	0.066	282.00	5.76	N/A	N/A
N/A	11:35 AM	0.132	7.9	15.70	4.53	0.067	288.00	4.81	0.31	49.97



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Cumulative Volume Purged: 30,000 ml = 30L~7.5gal. Sampling Time: 11:45-11:48.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-17I	Sample ID: GM-17I
Sample Date: 10/23/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:55 PM	Weather: Cloudy Cold Scattered Showers 50 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 40	Screen Interval: 99.5 to 119.5 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 120 ft bmp	Pump Intake Depth: Initial: 110 ft bmp Final: N/A	
Depth to Water: 44.0 ft bmp	Purge Time: 2:51 PM to 3:51 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:51 PM	N/A	N/A	15.20	5.22	0.085	508.00	7.47	0.10	N/A
N/A	2:56 PM	0.106	N/A	15.00	5.22	0.089	512.00	7.30	N/A	44.02
N/A	3:01 PM	0.106	N/A	15.20	5.53	0.089	513.00	6.92	N/A	N/A
N/A	3:06 PM	0.106	N/A	15.10	5.60	0.089	514.00	6.89	N/A	44.01
N/A	3:11 PM	0.106	N/A	15.40	5.62	0.089	515.00	6.58	0.69	N/A
N/A	3:16 PM	0.106	N/A	15.30	5.67	0.089	510.00	6.28	N/A	44.01
N/A	3:21 PM	0.106	N/A	15.30	5.67	0.089	516.00	6.56	N/A	N/A
N/A	3:26 PM	0.106	N/A	15.00	5.70	0.089	516.00	6.77	N/A	44.02
N/A	3:31 PM	0.106	N/A	15.00	5.71	0.089	516.00	6.42	0.24	N/A
N/A	3:36 PM	0.106	N/A	15.00	5.73	0.089	516.00	6.69	N/A	44.02
N/A	3:41 PM	0.106	N/A	15.10	5.75	0.089	515.00	6.63	N/A	N/A
N/A	3:46 PM	0.106	N/A	15.10	5.75	0.089	517.00	6.43	N/A	44.02
N/A	3:51 PM	0.106	6.3	15.20	5.76	0.089	517.00	6.55	0.17	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: No PID screen at wellhead due to dampness and scattered rain. Sampling Time: 15: 55-15:58.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.GWMI2	Well ID:	GM-17D	Sample ID: GM-17D
Sample Date:	10/23/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	2:40 PM	Weather:	Cloudy Cold Scattered Showers 45 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855322	LaMotte 2020 we: 1810-0412
Casing Material:	PVC sch 40	Screen Interval:	278.0 to 298.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	N/A	Packer Pressure:	N/A	
Measured Well Depth:	298 ft bmp	Pump Intake Depth:	Initial: 288 ft bmp Final: N/A	
Depth to Water:	48.71 ft bmp	Purge Time:	1:37 PM	to 2:37 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:37 PM	N/A	N/A	15.50	5.90	0.100	291.00	6.85	0.22	N/A
N/A	1:42 PM	0.106	N/A	15.10	5.42	0.093	402.00	7.39	N/A	48.74
N/A	1:47 PM	0.106	N/A	14.80	5.40	0.089	474.00	7.44	N/A	N/A
N/A	1:52 PM	0.106	N/A	14.80	5.32	0.090	493.00	7.72	N/A	48.76
N/A	1:57 PM	0.106	N/A	14.70	5.30	0.090	495.00	7.54	0.01	N/A
N/A	2:02 PM	0.106	N/A	14.70	5.24	0.089	497.00	7.66	N/A	48.76
N/A	2:07 PM	0.106	N/A	14.60	5.18	0.089	500.00	7.67	N/A	N/A
N/A	2:12 PM	0.106	N/A	14.70	5.12	0.089	502.00	7.69	N/A	48.78
N/A	2:17 PM	0.106	N/A	14.60	5.09	0.089	505.00	7.48	0.00	N/A
N/A	2:22 PM	0.106	N/A	14.60	5.07	0.089	506.00	8.05	N/A	48.82
N/A	2:27 PM	0.106	N/A	14.60	5.07	0.089	507.00	7.59	N/A	N/A
N/A	2:32 PM	0.106	N/A	14.60	5.07	0.089	508.00	8.12	N/A	48.79
N/A	2:37 PM	0.106	6.3	14.80	5.02	0.089	510.00	7.69	0.00	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: No PID screen at wellhead due to dampness and scattered rain. sampling Time: 14:40-14:45.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-18I	Sample ID: GM-18I
Sample Date: 10/16/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:49 PM	Weather: Cloudy Humid 65 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: YSI	LaMotte 2020
Measuring Point: TOC	Serial #: YSI 556 MPS (Serial # 10K101390)	LaMotte 2020 we: 1810-0412
Casing Material: unknown	Screen Interval: 95.0 to 105.0 ft	
Casing Diameter: 4 in	Packer Depth: 94 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 75.00 psi	
Measured Well Depth: 105 ft bmp	Pump Intake Depth: Initial: ft bmp Final: N/A	
Depth to Water: 41.84 ft bmp	Purge Time: 3:41 PM	to 4:45 PM
Water Column in Well: 11.00 ft		
Gallons in Well: 7.15 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 22.00 gal	
	Actual Volume Removed: 22 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	3:41 PM	N/A	0.0	17.32	5.22	0.154	N/A	N/A	0.61	36.91
1	4:12 PM	0.375	7.5	16.48	5.62	0.146	N/A	N/A	0.80	36.77
2	4:30 PM	0.375	15.0	16.27	5.35	0.145	N/A	N/A	0.73	36.90
3	4:45 PM	0.375	22.0	16.50	5.15	0.145	N/A	N/A	1.09	36.85

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	Pump intake just below packer. Rate lowered prior to sampling.

Comments

General Comments: Threaded connection leaking. CDM5: Refill 7.6; Discharge 4.4. Standard formula used to calculate PSI. Sampling Remarks: N/A

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	mS/cm	millisiemens per centimeter	NTU	nephelometric turbidity units	psi	pounds per square inch
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	SU	standard units
F	degrees Fahrenheit	gal	gallons							TOC	top of casing



Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.GWMI2	Well ID:	GM-18D	Sample ID: GM-18D
Sample Date:	10/15/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	4:15 PM	Weather:	Humid Cloudy 65 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855322	LaMotte 2020 we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	290.0 to 300.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	300 ft bmp	Pump Intake Depth:	Initial: 295 ft bmp Final: N/A	
Depth to Water:	45.11 ft bmp	Purge Time:	3:11 PM	to 4:11 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	23.125 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:11 PM	0.000	0.0	22.30	5.66	0.067	3.02	6.92	1.29	45.11
N/A	3:16 PM	0.099	0.5	20.00	5.36	0.068	300.00	6.26	N/A	N/A
N/A	3:21 PM	0.099	1.0	19.70	5.34	0.071	301.00	6.56	N/A	45.12
N/A	3:26 PM	0.132	1.5	18.80	5.22	0.075	3.07	7.24	N/A	N/A
N/A	3:31 PM	0.132	2.0	18.40	5.17	0.075	311.00	7.07	0.46	45.10
N/A	3:36 PM	0.132	2.6	18.40	5.13	0.076	312.00	6.86	N/A	N/A
N/A	3:41 PM	0.132	3.1	18.40	5.10	0.075	316.00	6.65	N/A	45.12
N/A	3:46 PM	0.132	3.6	18.40	5.10	0.075	316.00	6.73	N/A	N/A
N/A	3:51 PM	0.132	4.1	18.30	5.07	0.076	320.00	6.65	N/A	45.12
N/A	3:56 PM	0.132	4.6	18.30	5.07	0.076	320.00	6.54	0.30	N/A
N/A	4:01 PM	0.132	5.1	18.30	5.04	0.075	321.00	6.60	N/A	45.11
N/A	4:06 PM	0.132	5.6	18.30	5.04	0.076	323.00	6.63	N/A	N/A
N/A	4:11 PM	0.132	23.1	18.30	5.04	0.075	324.00	6.68	0.20	45.11

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	Sampling Time: 16:15-16:18. Cumulative Volume purged: 28,750 ml = 28.75L~7.2 gal

Comments

General Comments: N/A
 Sampling Remarks: See Instrument Calibration Log for WQ Instrum. Specs.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	L	liters	mL/min	milliliters per minute	N/A	not available	ppm	parts per million
CG	clear glass	gal	gallons	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	HCL	hydrochloric acid							TOC	top of casing
										uS/cm	microsiemens per centimeter



Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-33D2	Sample ID: GM-33D2
Sample Date: 10/21/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:14 PM	Weather: Raining Cloudy 55 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020we:1810-0412
Casing Material: PVC sch 40	Screen Interval: 500.0 to 520.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 520 ft bmp	Pump Intake Depth: Initial: 510 ft bmp Final: N/A	
Depth to Water: 48.91 ft bmp	Purge Time: 2:06 PM to 3:06 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 30 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:06 PM	N/A	N/A	15.70	6.77	0.065	242.00	7.75	0.07	N/A
N/A	2:11 PM	0.132	N/A	15.20	6.53	0.067	214.00	6.17	N/A	48.89
N/A	2:16 PM	0.132	N/A	15.20	6.37	0.068	212.00	6.23	N/A	N/A
N/A	2:21 PM	0.132	N/A	15.20	6.29	0.068	209.00	6.04	N/A	48.91
N/A	2:26 PM	0.132	N/A	15.20	6.23	0.068	204.00	6.03	0.01	N/A
N/A	2:31 PM	0.132	N/A	15.30	6.17	0.069	202.00	6.22	N/A	48.91
N/A	2:36 PM	0.132	N/A	15.30	6.17	0.068	197.00	6.14	N/A	N/A
N/A	2:41 PM	0.132	N/A	15.40	6.15	0.069	196.00	5.85	N/A	48.91
N/A	2:46 PM	0.132	N/A	15.50	6.16	0.069	196.00	5.52	N/A	N/A
N/A	2:51 PM	0.132	N/A	15.50	5.96	0.070	204.00	6.05	N/A	48.91
N/A	2:56 PM	0.132	N/A	15.50	5.95	0.071	216.00	5.77	N/A	N/A
N/A	3:01 PM	0.132	N/A	15.40	5.33	0.072	224.00	6.58	0.20	48.91
N/A	3:06 PM	0.132	7.9	15.40	5.20	0.072	227.00	6.37	0.01	48.80

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: No PID screen at wellhead due to heavy rain.
 Cumulative Volume purged: 30,000mL=30L ~ 7.5gal. Sampling Time: 15:14-15:19.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								



Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-34D	Sample ID: GM-34D
Sample Date: 10/16/2014	Duplicate: REP101614KM1	Other QC: N/A
Sample Time: 12:04 PM	Weather: Cloudy Humid Scattered Showers 65 F	

Purge Method: Other Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 40	Screen Interval: 309.0 to 319.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 319 ft bmp	Pump Intake Depth: Initial: ft bmp Final: N/A	
Depth to Water: 14.71 ft bmp	Purge Time: 10:48 AM	to 11:48 AM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 4 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:48 AM	N/A	0.0	18.10	6.78	0.106	428.00	2.04	2.05	14.96
N/A	10:53 AM	0.211	1.1	17.40	7.96	0.111	261.00	1.29	N/A	N/A
N/A	10:58 AM	0.211	1.1	17.20	8.73	0.111	100.00	0.41	N/A	14.71
N/A	11:03 AM	0.211	1.1	17.30	8.83	0.110	76.00	0.48	N/A	N/A
N/A	11:08 AM	0.211	1.1	17.10	8.80	0.108	64.00	0.45	N/A	14.74
N/A	11:13 AM	0.211	1.1	17.00	6.66	0.111	67.00	0.49	N/A	N/A
N/A	11:18 AM	0.106	0.5	16.80	6.62	0.111	67.00	0.50	N/A	14.73
N/A	11:23 AM	0.106	0.5	17.10	6.56	0.112	71.00	0.56	1.75	N/A
N/A	11:28 AM	0.106	0.5	17.20	6.50	0.112	74.00	0.69	N/A	14.68
N/A	11:33 AM	0.106	0.5	17.30	6.30	0.112	88.00	0.84	N/A	N/A
N/A	11:38 AM	0.106	0.5	17.30	6.28	0.112	91.00	0.86	N/A	14.74
N/A	11:43 AM	0.106	0.5	17.30	6.21	0.112	95.00	0.84	N/A	N/A
N/A	11:48 AM	0.106	0.5	17.30	6.13	0.112	98.00	0.80	2.14	14.81

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: No PID screen taken at wellhead due to rain.
 Dedicated bladder pump - pump stuck in well.
 Sampling Remarks: Cumulative Volume purged: 38,000 ml = 38L ~ 9.5 gal. Sampling Time: 1204-1208.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-34D2	Sample ID: GM-34D2
Sample Date: 10/16/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:45 PM	Weather: Cloudy Humid Raining 65 F	

Purge Method: Non-Dedicated Bladder Pump	Water Quality Meters: YSI 550A	Turbidity Meter
Measuring Point: TOC	Serial #: 05A1522AA	Lamotte 2020we; SN: 1810-0412
Casing Material: PVC sch 40	Screen Interval: 510.0 to 520.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 520 ft bmp	Pump Intake Depth: Initial: 515 ft bmp Final: N/A	
Depth to Water: 16.57 ft bmp	Purge Time: 11:15 AM to 12:35 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove: _____ = Total Volume to Remove: _____ Actual Volume Removed: 32 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:15 AM	0.145	N/A	17.62	6.77	0.112	239.10	2.62	N/A	16.57
N/A	11:20 AM	0.145	N/A	17.07	6.75	0.107	231.30	1.38	34.00	N/A
N/A	11:25 AM	0.145	N/A	16.98	6.86	0.107	221.50	0.98	N/A	16.57
N/A	11:30 AM	0.145	N/A	17.00	6.96	0.107	215.30	0.76	N/A	N/A
N/A	11:35 AM	0.145	N/A	17.04	7.13	0.106	202.30	0.71	N/A	16.54
N/A	11:40 AM	0.145	N/A	17.09	7.20	0.107	194.30	0.71	N/A	N/A
N/A	11:45 AM	0.145	N/A	17.13	7.23	0.106	191.40	0.72	N/A	16.54
N/A	11:50 AM	0.145	N/A	17.17	7.24	0.106	189.90	0.77	N/A	N/A
N/A	12:10 PM	0.132	N/A	16.85	7.70	0.090	164.60	0.97	29.30	16.53
N/A	12:15 PM	0.132	N/A	17.21	8.15	0.085	156.10	0.34	N/A	N/A
N/A	12:20 PM	0.132	N/A	17.12	7.85	0.107	N/A	1.10	N/A	N/A
N/A	12:25 PM	0.132	N/A	17.16	6.93	0.123	115.10	2.33	N/A	16.50
N/A	12:30 PM	0.132	N/A	17.22	6.29	0.121	121.40	3.03	N/A	16.51
N/A	12:35 PM	0.132	8.4	17.37	6.12	0.119	123.60	2.99	14.70	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	Turbidity at wellhead, at sample time, = 15.3 NTU.

Comments

General Comments: Transducer in well: removed at 1017 & returned at 1328. Bottom well tubing black, upper well tubing has "caked" deposits.
 Sampling Remarks: No PID reading at wellhead due to rain. Rate lowered prior to sampling. YSI 556 MPS; SN: 10K101390.

Technician: Patricia Prezorski|Kirk Vargas

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mS/cm	millisiemens per centimeter	N/A	not available	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-35D2	Sample ID: GM-35D2
Sample Date: 10/22/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 1:30 PM	Weather: Cloudy Cold Raining 50 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 40	Screen Interval: 510.0 to 530.0 ft	
Casing Diameter: 4 in	Packer Depth: 507 ft bls	
PID Reading: N/A	Packer Pressure: 255.00 psi	
Measured Well Depth: 530 ft bmp	Pump Intake Depth: Initial: 510 ft bmp Final: N/A	
Depth to Water: 39.35 ft bmp	Purge Time: 12:06 PM to 1:25 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 45 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:06 PM	N/A	N/A	14.60	6.63	0.081	N/A	N/A	0.24	39.24
N/A	12:40 PM	0.686	15.0	14.40	5.82	0.077	N/A	N/A	0.07	39.23
N/A	1:02 PM	0.686	30.0	14.40	5.52	0.078	N/A	N/A	0.11	38.73
N/A	1:25 PM	0.686	45.0	14.40	5.42	0.080	N/A	N/A	0.07	37.55

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	Rate lowered prior to sampling,

Comments

General Comments: Packer at 507 ft bls. Packer pressure used standard formula; calculated at 251 psi. Therefore, 530-507 ft = 23 ft. water in column; 23ft x 0.65 gal/ft. = 14.95 gal 43= 44.85 gal to purge. Parameters ev. 15gal. CPM-6 w/ Refill: 6.4; Discharge: 3.6. Sampling Remarks: No PID screen at wellhead due to rain/inclemency; Pump assumed to be just below packer at top of screen ~510 ft bls. Split Sample "GM-35D2" taken on behalf of Bethp. WD; 40 mL vials from PACE lab. Rate lowered prior to sampling. Sampling time:13:30-13:35.

Technician: Karla Miranda|Kirk Vargas

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	L	liters	N/A	not available	psi	pounds per square inch	TOC	top of casing
CG	clear glass	gal	gallons	mL/min	milliliters per minute	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	HCL	hydrochloric acid								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.3141.GWMI2	Well ID: GM-38D	Sample ID: GM-38D
Sample Date: 10/22/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:20 PM	Weather: Cloudy Cold Raining 55 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 40	Screen Interval: 320.0 to 340.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 340 ft bmp	Pump Intake Depth: Initial: 330 ft bmp Final: N/A	
Depth to Water: N/A	Purge Time: 2:13 PM to 3:13 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 21 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	2:13 PM	N/A	N/A	14.60	6.42	0.072	154.00	1.49	0.18	39.47
N/A	2:18 PM	0.092	N/A	14.40	6.52	0.074	154.00	1.37	N/A	N/A
N/A	2:23 PM	0.092	N/A	14.40	6.44	0.076	127.00	1.41	N/A	39.49
N/A	2:28 PM	0.092	N/A	14.40	5.60	0.077	148.00	1.25	N/A	N/A
N/A	2:33 PM	0.092	N/A	14.30	5.29	0.077	152.00	0.94	0.18	39.43
N/A	2:38 PM	0.092	N/A	14.40	5.04	0.079	186.00	0.56	N/A	N/A
N/A	2:43 PM	0.092	N/A	14.40	4.91	0.188	188.00	0.79	N/A	39.46
N/A	2:48 PM	0.092	N/A	14.40	4.83	0.080	185.00	0.63	N/A	N/A
N/A	2:53 PM	0.092	N/A	14.40	4.78	0.080	183.00	0.70	0.18	39.54
N/A	2:58 PM	0.092	N/A	14.40	4.73	0.081	180.00	0.60	N/A	N/A
N/A	3:03 PM	0.092	N/A	14.40	4.69	0.081	176.00	0.55	N/A	39.49
N/A	3:08 PM	0.092	N/A	14.40	4.67	0.081	173.00	0.57	N/A	N/A
N/A	3:13 PM	0.092	5.5	14.40	4.66	0.081	171.00	0.63	0.03	39.52

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: No PID screen at wellhead due to damp ness and scattered rain. Split Sample "GM-38D" taken on behalf of Bethp. WD; 40 mL vials from PACE lab.

Technician: Karla Miranda|Kirk Vargas

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-38D2	Sample ID: GM-38D2
Sample Date: 10/22/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:30 PM	Weather: Cloudy Cold Scattered Showers 50 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 40	Screen Interval: 475.0 to 495.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: N/A	Packer Pressure: N/A	
Measured Well Depth: 495 ft bmp	Pump Intake Depth: Initial: 485 ft bmp Final: N/A	
Depth to Water: 42.24 ft bmp	Purge Time: 3:27 PM to 4:27 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 28.5 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	3:27 PM	N/A	N/A	14.60	4.35	0.110	186.00	3.63	N/A	39.35
N/A	3:32 PM	0.053	N/A	14.50	4.35	0.110	186.00	3.52	0.67	N/A
N/A	3:37 PM	0.132	N/A	14.30	4.33	0.109	183.00	3.45	N/A	42.34
N/A	3:42 PM	0.132	N/A	14.00	4.28	0.109	182.00	3.22	N/A	N/A
N/A	3:47 PM	0.132	N/A	14.20	4.24	0.109	176.00	2.55	0.41	42.39
N/A	3:52 PM	0.132	N/A	14.20	4.25	0.109	170.00	1.80	N/A	N/A
N/A	3:57 PM	0.132	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4:02 PM	0.132	N/A	14.20	4.22	0.109	167.00	1.14	1.45	42.38
N/A	4:07 PM	0.132	N/A	14.20	4.18	0.108	161.00	0.71	N/A	42.38
N/A	4:12 PM	0.132	N/A	14.20	4.16	0.017	159.00	0.61	N/A	42.40
N/A	4:17 PM	0.132	N/A	14.20	4.14	0.108	151.00	0.62	N/A	42.40
N/A	4:22 PM	0.132	N/A	14.10	4.15	0.108	150.00	0.60	N/A	42.40
N/A	4:27 PM	0.132	7.5	14.10	4.15	0.108	151.00	0.59	1.41	42.45



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	Rate lowered prior to sampling. Sampling time:16:30-16:35.

Comments

General Comments: N/A
 Sampling Remarks: No PID screen at wellhead due to damp ness and scattered rain. Split Sample "GM-38D2" taken on behalf of Bethp. WD; 40 mL vials from PACE lab.

Technician: Karla Miranda|Kirk Vargas

Signature: _____

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								



Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-39DA	Sample ID: GM-39DA
Sample Date: 10/15/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 2:04 PM	Weather: Humid Cloudy 70 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: YSI 550A	Turbidity Meter
Measuring Point: TOC	Serial #: 05A1522AA	Lamotte 2020we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 262.0 to 282.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 282 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 38.74 ft bmp	Purge Time: 1:00 PM to 2:00 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 30 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:00 PM	0.119	N/A	18.64	4.90	0.271	242.70	7.66	N/A	38.74
N/A	1:05 PM	0.119	N/A	18.53	4.80	0.269	255.80	7.38	0.90	N/A
N/A	1:10 PM	0.119	N/A	18.54	4.91	0.268	255.80	7.36	N/A	38.74
N/A	1:15 PM	0.119	N/A	18.47	4.94	0.268	255.60	7.44	N/A	N/A
N/A	1:20 PM	0.119	N/A	18.47	4.95	0.267	255.70	7.29	N/A	38.74
N/A	1:25 PM	0.119	N/A	18.48	4.95	0.267	255.20	7.29	N/A	N/A
N/A	1:30 PM	0.119	N/A	18.52	4.97	0.267	254.30	7.33	0.81	38.74
N/A	1:35 PM	0.119	N/A	18.54	5.01	0.266	252.30	7.23	N/A	38.74
N/A	1:40 PM	0.119	N/A	18.66	5.06	0.266	249.50	7.36	N/A	N/A
N/A	1:45 PM	0.119	N/A	18.71	5.09	0.265	247.90	7.16	0.86	38.74
N/A	1:50 PM	0.119	N/A	18.64	5.09	0.265	247.40	7.23	N/A	N/A
N/A	1:55 PM	0.119	N/A	18.58	5.06	0.265	247.90	7.22	N/A	38.74
N/A	2:00 PM	0.119	7.9	18.59	5.06	0.265	248.20	7.18	0.25	38.73

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	YSI 556 MPS; SN: 10K101390

Comments

General Comments: N/A
 Sampling Remarks: Grey van PID. Rate lowered prior to sampling.

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mS/cm	millisiemens per centimeter	N/A	not available	ppm	parts per million
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	L	liters							TOC	top of casing

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.GWMI2	Well ID:	GM-39DB	Sample ID: GM-39DB
Sample Date:	10/15/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	1:54 PM	Weather:	Cloudy Humid 65 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855322	LaMotte 2020we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	410.0 to 420.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	420 ft bmp	Pump Intake Depth:	Initial: 415 ft bmp Final: N/A	
Depth to Water:	41.93 ft bmp	Purge Time:	12:45 PM	to 1:45 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	2.25 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	12:45 PM	0.000	0.0	18.70	4.93	0.093	315.00	5.56	N/A	41.68
N/A	12:50 PM	0.119	0.6	18.50	4.88	0.099	307.00	6.07	N/A	N/A
N/A	12:55 PM	0.119	0.6	18.20	4.82	0.100	310.00	6.06	N/A	41.65
N/A	1:00 PM	0.119	0.6	18.40	4.74	0.107	316.00	6.62	1.32	N/A
N/A	1:05 PM	0.119	0.6	18.30	4.73	0.107	316.00	6.41	N/A	41.65
N/A	1:10 PM	0.119	0.6	17.90	4.71	0.107	318.00	6.36	0.24	N/A
N/A	1:15 PM	0.119	0.6	17.90	4.70	0.107	320.00	6.08	N/A	41.61
N/A	1:20 PM	0.119	0.6	17.90	4.68	0.107	322.00	6.32	N/A	N/A
N/A	1:25 PM	0.119	0.6	17.80	4.68	0.106	324.00	6.14	N/A	41.65
N/A	1:30 PM	0.119	N/A	17.80	4.68	0.105	324.00	6.22	0.18	N/A
N/A	1:35 PM	0.119	0.6	17.90	4.68	0.105	327.00	6.20	N/A	41.61
N/A	1:40 PM	0.119	0.6	17.90	4.68	0.105	327.00	6.14	N/A	N/A
N/A	1:45 PM	0.119	0.6	18.00	4.69	0.105	327.00	6.35	0.25	41.61

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	Sampling Time: 13:54-13:57. Cumulative Volume purged: 27,000mL: 27.0 L ~ 6.75 gal.

Comments

General Comments: N/A
 Sampling Remarks: Please see Instrum Calib. Log for addtl. WQ Instrum Specs. Note: Initial PiD readings were made directly above measuring port. These were 21.0 ppm and 4.1 ppm. Reading at grade above well head =0.0 ppm. Note-ambient humidity is high.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-73D	Sample ID: GM-73D
Sample Date: 10/17/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 11:23 PM	Weather: Sunny 70 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: N/A	N/A
Measuring Point: TOC	Serial #: N/A	N/A
Casing Material: PVC sch 80	Screen Interval: 401.0 to 411.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 411 ft bmp	Pump Intake Depth: Initial: 43.37 ft bmp Final: N/A	
Depth to Water: 43.37 ft bmp	Purge Time: 10:20 AM to 11:00 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed:	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:20 AM	0.100	N/A	15.25	4.21	0.115	283.10	6.88	0.00	43.37
N/A	10:25 AM	N/A	N/A	15.83	4.45	0.116	267.40	7.71	N/A	N/A
N/A	10:30 AM	N/A	N/A	15.90	4.64	0.116	257.00	7.91	N/A	43.31
N/A	10:35 PM	0.095	N/A	15.93	4.72	0.116	253.40	7.74	0.00	N/A
N/A	10:25 AM	N/A	N/A	15.90	4.77	0.116	248.30	7.86	N/A	43.31
N/A	10:45 AM	N/A	N/A	15.90	4.77	0.116	247.00	8.14	N/A	N/A
N/A	10:50 AM	N/A	N/A	15.94	4.79	0.116	244.30	7.81	N/A	N/A
N/A	10:55 AM	N/A	N/A	15.94	4.79	0.116	244.00	7.65	N/A	43.31
N/A	11:00 PM	0.111	N/A	15.91	4.80	0.115	243.20	8.00	N/A	N/A
N/A	11:05 AM	N/A	N/A	15.90	4.77	0.116	243.40	8.20	N/A	43.32
N/A	11:10 AM	N/A	N/A	15.89	4.79	0.116	241.70	7.90	N/A	N/A
N/A	11:15 AM	N/A	N/A	15.89	4.79	0.116	241.70	8.33	N/A	43.41
N/A	11:20 AM	N/A	N/A	15.86	4.78	0.115	241.20	8.19	0.25	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: clear Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: N/A

Technician: Kirk Vargas

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	mg/L	milligrams per liter	mS/cm	millisiemens per centimeter	N/A	not available	ppm	parts per million
CG	clear glass	ft bmp	feet below measuring point	mL/min	milliliters per minute	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	HCL	hydrochloric acid							TOC	top of casing

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-73D2	Sample ID: GM-73D2
Sample Date: 10/17/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 9:52 AM	Weather: Sunny 70 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: YSI	N/A
Measuring Point: TOC	Serial #: YSI 556 MSP serial # 10K 101390	N/A
Casing Material: PVC sch 40	Screen Interval: 532.0 to 552.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 1.4 ppm	Packer Pressure: N/A	
Measured Well Depth: 552 ft bmp	Pump Intake Depth: Initial: 542 ft bmp Final: N/A	
Depth to Water: 45.68 ft bmp	Purge Time: 8:40 AM	to 9:05 PM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 23 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	8:50 AM	0.100	N/A	16.64	4.76	0.113	253.50	10.15	N/A	45.68
N/A	8:55 AM	0.100	N/A	15.82	4.30	0.111	281.70	5.88	N/A	N/A
N/A	9:00 AM	0.100	N/A	16.11	4.33	0.110	276.00	5.71	N/A	44.81
N/A	9:05 PM	0.100	N/A	16.32	4.40	0.111	272.00	5.81	N/A	N/A
N/A	9:10 AM	0.100	N/A	16.40	4.53	0.111	264.40	5.93	N/A	44.77
N/A	9:15 AM	0.100	N/A	16.45	4.58	0.111	264.30	5.87	N/A	N/A
N/A	9:20 AM	0.100	N/A	16.44	4.57	0.110	262.50	6.16	0.00	44.61
N/A	9:25 AM	0.100	N/A	16.44	4.60	0.110	262.60	6.15	N/A	N/A
N/A	9:30 AM	0.100	N/A	16.45	4.60	0.110	260.30	6.12	0.00	44.24
N/A	9:35 AM	0.100	N/A	16.49	4.60	0.110	258.00	6.00	N/A	N/A
N/A	9:40 AM	0.100	N/A	16.49	4.64	0.109	258.30	6.30	N/A	44.53
N/A	9:45 AM	0.100	N/A	16.48	4.64	0.109	257.30	5.99	0.20	N/A
N/A	9:50 AM	0.100	6.1	16.50	4.65	0.109	255.40	5.85	N/A	44.56

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: No Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: N/A

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mS/cm	millisiemens per centimeter	N/A	not available	ppm	parts per million
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	L	liters							TOC	top of casing

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-74I	Sample ID: GM-74I
Sample Date: 10/17/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 9:57 AM	Weather: Sunny 60 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 40	Screen Interval: 94.0 to 114.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 114 ft bmp	Pump Intake Depth: Initial: 104 ft bmp Final: N/A	
Depth to Water: 40.58 ft bmp	Purge Time: 8:48 AM	to 9:43 AM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed:	25.56 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	8:53 AM	0.112	0.6	17.60	5.69	0.081	228.00	5.90	N/A	N/A
N/A	8:58 AM	0.112	1.1	17.50	5.56	0.075	223.00	5.51	1.21	40.62
N/A	9:03 AM	0.112	1.7	17.50	5.54	0.074	223.00	5.38	N/A	N/A
N/A	9:08 AM	0.112	2.2	17.50	5.50	0.073	221.00	5.27	N/A	40.66
N/A	9:13 AM	0.112	10.7	17.50	5.46	0.072	220.00	5.43	N/A	N/A
N/A	9:18 AM	0.112	3.4	17.50	5.43	0.072	218.00	5.17	N/A	40.64
N/A	9:23 AM	0.112	3.9	17.50	5.42	0.072	218.00	5.20	N/A	N/A
N/A	9:28 AM	0.112	4.5	17.60	5.42	0.072	217.00	5.23	0.90	40.65
N/A	9:33 AM	0.112	5.1	17.60	5.40	0.072	215.00	5.23	N/A	N/A
N/A	9:38 AM	0.112	21.3	17.60	5.39	0.072	215.00	5.23	N/A	40.65
N/A	9:43 AM	0.112	6.2	17.60	5.39	0.072	214.00	5.15	N/A	N/A
N/A	8:48 AM	0.112	6.7	17.60	5.39	0.072	213.00	5.09	0.78	40.66



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Cumulative Volume Purged: =5,500mL=25.5L ~ 6.4 gal. Sampling Time. 09:57-09:59.

Technician: Karla Miranda

Signature: _____

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units
CG	clear glass	ft bmp	feet below measuring point	L	liters	mL/min	milliliters per minute	N/A	not available	ppm	parts per million
F	degrees Fahrenheit	gal	gallons							SU	standard units
										TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-74D	Sample ID: GM-74D
Sample Date: 10/17/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 11:27 AM	Weather: Sunny Windy 60 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 40	Screen Interval: 295.0 to 305.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 8.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 305 ft bmp	Pump Intake Depth: Initial: 300 ft bmp Final: N/A	
Depth to Water: 45.34 ft bmp	Purge Time: 10:23 AM to 11:23 AM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 24.25 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:23 AM	0.000	0.0	19.20	5.50	0.070	218.00	5.78	2.41	45.34
N/A	10:28 AM	0.079	1.5	19.40	4.94	0.066	239.00	5.76	N/A	N/A
N/A	10:33 AM	0.079	0.8	19.40	4.84	0.065	242.00	5.44	N/A	45.30
N/A	10:38 AM	0.092	1.3	19.10	4.68	0.062	242.00	6.22	0.48	N/A
N/A	10:43 AM	0.092	1.7	18.00	4.63	0.061	233.00	5.43	N/A	45.30
N/A	10:48 AM	0.092	2.2	17.70	4.61	0.061	233.00	5.47	N/A	N/A
N/A	10:53 AM	0.092	2.6	18.40	4.60	0.060	231.00	5.44	N/A	45.30
N/A	10:58 AM	0.092	3.1	18.40	4.59	0.061	231.00	5.37	N/A	N/A
N/A	11:03 AM	0.132	3.8	15.58	4.56	0.061	223.00	5.53	0.09	45.34
N/A	11:08 AM	0.132	4.4	17.80	4.54	0.061	220.00	5.47	N/A	N/A
N/A	11:13 AM	0.132	5.1	17.80	4.53	0.061	220.00	5.55	N/A	45.31
N/A	11:18 AM	0.132	5.7	17.70	4.53	0.061	219.00	5.47	N/A	N/A
N/A	11:23 AM	0.132	6.4	17.60	4.52	0.061	219.00	5.67	0.10	45.35



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Note: PID was taken just above MP; screening was 0.0 ppm at grade. Cumulative Volume Purged: 24,250ml: 24.25L ~ 6 gal. Sampling Time: 11:27-11:30.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	L	liters	mL/min	milliliters per minute	N/A	not available	ppm	parts per million
CG	clear glass	gal	gallons	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
F	degrees Fahrenheit	HCL	hydrochloric acid							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.GWMI2	Well ID:	GM-74D2	Sample ID: GM-74D2
Sample Date:	10/17/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	12:58 PM	Weather:	Sunny Humid 70 F	

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855322	LaMotte 2020 we: 1810-0412
Casing Material:	PVC sch 40	Screen Interval:	542.0 to 562.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	0.0 ppm	Packer Pressure:	N/A	
Measured Well Depth:	562 ft bmp	Pump Intake Depth:	Initial: 552 ft bmp Final: N/A	
Depth to Water:	51.33 ft bmp	Purge Time:	11:51 AM	to 12:51 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	2.5 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:51 AM	0.000	0.0	20.40	4.74	0.060	226.00	6.48	N/A	51.33
N/A	11:56 AM	0.092	0.5	19.60	4.80	0.059	211.00	4.64	0.20	N/A
N/A	12:01 PM	0.132	0.7	19.10	4.78	0.059	204.00	3.05	N/A	51.34
N/A	12:06 PM	0.132	0.7	18.10	4.82	0.061	195.00	1.81	0.17	N/A
N/A	12:11 PM	0.132	0.7	17.80	4.84	0.065	192.00	2.92	N/A	51.33
N/A	12:16 PM	0.132	0.7	17.70	4.76	0.064	192.00	2.91	0.74	N/A
N/A	12:21 PM	0.132	0.7	17.60	4.65	0.061	189.00	2.96	N/A	51.46
N/A	12:26 PM	0.132	0.7	17.60	4.67	0.061	190.00	3.16	N/A	N/A
N/A	12:31 PM	0.132	0.7	17.60	4.67	0.061	189.00	3.17	0.77	51.37
N/A	12:36 PM	0.132	0.7	17.50	4.67	0.061	190.00	3.25	N/A	N/A
N/A	12:41 PM	0.132	0.7	17.50	4.67	0.061	191.00	3.26	N/A	51.39
N/A	12:46 PM	0.132	0.7	17.40	4.67	0.062	190.00	3.38	N/A	N/A
N/A	12:51 PM	0.132	0.7	17.40	4.67	0.062	191.00	3.40	N/A	51.37

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Cumulative Volume Purged: 29,250 ml 29.25 L
 ~ 7.3 gal. Sampling Time: 12:58-13:00.

Technician: Karla Miranda

Signature: _____



Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-75D2	Sample ID: GM-75D2
Sample Date: 10/21/2014	Duplicate: N/A	Other QC: MS/MSD
Sample Time: 11:49 AM	Weather: Sunny 60 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 505.0 to 525.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.4 ppm	Packer Pressure: N/A	
Measured Well Depth: 525 ft bmp	Pump Intake Depth: Initial: 515 ft bmp Final: N/A	
Depth to Water: 35.70 ft bmp	Purge Time: 10:41 AM	to 11:41 AM
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed:	22 L

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:41 AM	N/A	N/A	16.50	6.28	0.220	298.00	5.43	0.57	N/A
N/A	10:46 AM	0.079	0.4	15.80	5.60	0.089	406.00	4.26	N/A	35.71
N/A	10:51 AM	0.079	0.8	16.00	5.59	0.083	507.00	4.80	N/A	N/A
N/A	10:56 AM	0.079	1.2	16.30	5.11	0.083	515.00	4.77	N/A	35.70
N/A	11:01 AM	0.079	1.6	16.60	4.96	0.081	521.00	4.75	102.00	N/A
N/A	11:06 AM	0.106	2.1	16.60	4.89	0.080	525.00	5.06	N/A	35.68
N/A	11:11 AM	0.106	2.6	16.40	4.84	0.079	527.00	4.76	N/A	N/A
N/A	11:16 AM	0.106	3.2	16.20	4.77	0.079	529.00	4.67	N/A	35.63
N/A	11:21 AM	0.106	3.7	16.50	4.73	0.078	532.00	4.80	0.11	N/A
N/A	11:26 AM	0.106	4.2	16.70	4.71	0.079	531.00	4.62	N/A	35.63
N/A	11:31 AM	0.106	4.8	16.70	4.71	0.079	531.00	5.08	N/A	N/A
N/A	11:36 AM	0.106	5.3	16.80	4.70	0.079	531.00	4.61	N/A	35.62
N/A	11:41 AM	0.106	5.8	16.60	4.68	0.079	532.00	4.92	0.09	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: Dedicated transducer in/down well; Entered the well ~ 10:20am; Exited ~12:00.
 Sampling Remarks: Cumulative Volume purged: 22,000 mL = 22 L ~ 5.5 gal. Sampling Time: 11:49-11:56.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.GWMI2	Well ID: GM-79I	Sample ID: GM-79I
Sample Date: 10/24/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:45 PM	Weather: Cloudy Sunny 50 F	

Purge Method: Dedicated 2" Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: I 810-0412
Casing Material: PVC sch 80	Screen Interval: 170.0 to 180.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 13.1 ppm	Packer Pressure: N/A	
Measured Well Depth: 180 ft bmp	Pump Intake Depth: Initial: 175 ft bmp Final: N/A	
Depth to Water: 40.66 ft bmp	Purge Time: 11:42 AM to 12:42 PM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove:	
	= Total Volume to Remove:	
	Actual Volume Removed: 24 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	11:42 AM	N/A	N/A	14.00	6.01	0.357	290.00	6.16	N/A	N/A
N/A	11:47 AM	0.106	N/A	14.10	5.49	0.112	450.00	6.21	1.49	40.66
N/A	11:52 AM	0.106	N/A	14.00	5.24	0.085	493.00	7.06	N/A	N/A
N/A	11:57 AM	0.106	N/A	14.00	5.16	0.082	502.00	6.76	N/A	40.66
N/A	12:02 PM	0.106	N/A	14.00	5.12	0.079	500.00	6.75	0.88	N/A
N/A	12:07 PM	0.106	N/A	14.10	5.05	0.076	506.00	6.22	N/A	40.68
N/A	12:12 PM	0.106	N/A	14.30	4.95	0.073	506.00	6.64	N/A	N/A
N/A	12:17 PM	0.106	N/A	14.30	4.94	0.073	507.00	6.71	N/A	40.70
N/A	12:22 PM	0.106	N/A	14.10	4.90	0.072	513.00	6.35	0.59	N/A
N/A	12:27 PM	0.106	N/A	14.10	4.50	0.072	514.00	6.45	N/A	40.68
N/A	12:32 PM	0.106	N/A	14.10	4.88	0.071	515.00	6.83	N/A	N/A
N/A	12:37 PM	0.106	N/A	14.10	4.85	0.070	517.00	6.85	N/A	40.67
N/A	12:42 PM	0.106	6.3	14.10	4.85	0.070	517.00	6.80	0.67	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: High humidity within basin (ground vegetation is saturated) could be affecting PID screening. Sampling Time: 12:45-12:49.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY		
Project No:	NY001496.314I.GWMI2	Well ID:	GM-79D	Sample ID:	GM-79D
Sample Date:	10/24/2014	Duplicate:	N/A	Other QC:	N/A
Sample Time:	2:02 PM	Weather:	Cloudy Cold 45 F		

Purge Method:	Dedicated 2" Bladder Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	N/A	LaMotte 2020 we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	280.0 to 290.0 ft	
Casing Diameter:	4 in	Packer Depth:	N/A	
PID Reading:	N/A	Packer Pressure:	N/A	
Measured Well Depth:	290 ft bmp	Pump Intake Depth:	Initial: 285 ft bmp Final: N/A	
Depth to Water:	41.97 ft bmp	Purge Time:	1:00 PM	to 2:00 PM
Water Column in Well:				
Gallons in Well:		X Volumes to Remove:		
		= Total Volume to Remove:		
		Actual Volume Removed:	20 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	1:00 PM	N/A	N/A	13.70	4.80	0.070	523.00	6.70	0.61	N/A
N/A	1:05 PM	0.053	N/A	13.30	4.74	0.065	523.00	6.42	N/A	41.97
N/A	1:10 PM	0.053	N/A	13.40	4.77	0.065	523.00	6.22	N/A	N/A
N/A	1:15 PM	0.053	N/A	13.30	4.79	0.065	523.00	6.77	N/A	41.95
N/A	1:20 PM	0.053	N/A	13.30	4.75	0.065	523.00	10.62	N/A	41.95
N/A	1:25 PM	0.106	N/A	13.30	4.74	0.065	523.00	10.04	0.97	41.95
N/A	1:30 PM	0.106	N/A	13.30	4.74	0.065	520.00	9.53	N/A	N/A
N/A	1:35 PM	0.106	N/A	13.40	4.73	0.065	524.00	9.49	N/A	42.00
N/A	1:40 PM	0.106	N/A	13.40	4.73	0.065	524.00	8.80	0.59	N/A
N/A	1:45 PM	0.106	N/A	13.50	4.75	0.065	524.00	9.30	N/A	42.01
N/A	1:50 PM	0.106	N/A	13.40	4.75	0.065	524.00	8.67	N/A	N/A
N/A	1:55 PM	0.106	N/A	13.40	4.75	0.065	523.00	8.50	N/A	41.97
N/A	2:00 PM	0.106	5.3	13.50	4.76	0.065	524.00	8.66	0.75	N/A

Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: High humidity within basin (ground vegetation is saturated) could be affecting PID screening. Sampling Time: 14:02-14:04.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	TOC	top of casing
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	L	liters								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.GWMI2 **Well ID:** N-10631 **Sample ID:** N-10631
Sample Date: 10/21/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 1:15 PM **Weather:** Cloudy|Windy 60 F

Purge Method: Non-Dedicated Rediflo 2 Submersible Pump **Water Quality Meters:** OAKTON 300 Series LaMotte 2020
Measuring Point: TOC **Serial #:** 855322 LaMotte 2020 we; 1810-0412
Casing Material: unknown **Screen Interval:** 63.0 to 67.0 ft
Casing Diameter: 2 in **Packer Depth:** N/A
PID Reading: 0.0 ppm **Packer Pressure:** N/A
Measured Well Depth: 67.72 ft bmp **Pump Intake Depth:** Initial: 63 ft bmp Final: N/A
Depth to Water: 38.40 ft bmp **Purge Time:** 12:55 PM to 1:10 PM
Water Column in Well: 29.32 ft
Gallons in Well: 4.69 gal **X Volumes to Remove:** 3
= Total Volume to Remove: 14.07 gal
Actual Volume Removed: 15 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	12:55 PM	N/A	N/A	15.50	8.72	0.128	N/A	N/A	24.10	44.00
1	1:00 PM	1.000	5.0	15.40	7.95	0.128	N/A	N/A	18.20	42.72
2	1:05 PM	1.000	10.0	15.30	7.25	N/A	N/A	N/A	13.31	42.78
3	1:10 PM	1.000	15.0	15.30	6.47	0.125	N/A	N/A	9.43	42.85

Collected Sample Condition

Color: brown **Odor:** none **Appearance:** cloudy

Parameter	Container	# of Containers	Preservative	Comments
VOC (8260)	40 mL CG	3	HCL	N/A
Total Cr/Cd (EPA 6010)	250 mL PE	1	H2SO4	N/A
Dissolved Cr/Cd (EPA 6010)	250 mL PE	1	H2SO4	Field filtered using 0.45 micron Quick Filter.

Comments

General Comments: Depth to bottom sounded at 67.72 ft bls top of casing; bottom was a little soft. Replaced tubing in well; 1/2" new poly.
 Sampling Remarks: "brown" = yellowish-brown w/dark grey hue w/ suspended dark-grey/black particulates (organics?). 3V color was slight tinge of yellow-brown. Sampling Time:13:15-13:19.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	H2SO4	sulfuric acid	mV	millivolts	NTU	nephelometric turbidity units	ppm	parts per million
CG	clear glass	ft bmp	feet below measuring point	HCL	hydrochloric acid	N/A	not available	PE	polyethylene	SU	standard units
F	degrees Fahrenheit	gal	gallons							TOC	top of casing
										uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.1514.NAVI2	Well ID: TT-102D	Sample ID: TT-102D
Sample Date: 10/29/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 11:23 AM	Weather: Cloudy Sunny 60 F	

Purge Method: Non-Dedicated Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 560.0 to 600.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 618 ft bmp	Pump Intake Depth: Initial: 580 ft bmp Final: N/A	
Depth to Water: 20.90 ft bmp	Purge Time: 10:17 AM to 11:17 AM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove: _____ = Total Volume to Remove: _____ Actual Volume Removed: 30.25 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	10:17 AM	N/A	N/A	17.10	3.60	0.099	547.00	5.05	3.43	N/A
N/A	10:22 AM	0.145	N/A	15.90	3.35	0.110	551.00	1.75	N/A	21.72
N/A	10:27 AM	0.132	N/A	15.70	3.29	0.111	467.00	0.72	N/A	N/A
N/A	10:32 AM	0.132	N/A	15.70	3.38	0.111	434.00	0.60	N/A	21.87
N/A	10:37 AM	0.132	N/A	15.70	3.70	0.110	409.00	0.60	1.41	N/A
N/A	10:42 AM	0.132	N/A	15.70	3.78	0.110	357.00	0.60	N/A	21.97
N/A	10:47 AM	0.132	N/A	15.70	3.82	0.110	310.00	0.57	N/A	N/A
N/A	10:52 AM	0.132	N/A	15.70	3.87	0.110	291.00	0.55	N/A	22.05
N/A	10:57 AM	0.132	N/A	15.70	3.89	0.109	272.00	0.54	2.24	N/A
N/A	11:02 AM	0.132	N/A	15.70	3.89	0.109	270.00	0.53	1.85	22.13
N/A	11:07 AM	0.132	N/A	15.70	3.89	0.109	272.00	0.55	N/A	N/A
N/A	11:12 AM	0.132	N/A	15.80	3.88	0.109	273.00	0.55	N/A	22.16
N/A	11:17 AM	0.132	8.0	15.80	3.87	0.108	272.00	0.54	0.81	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Sampling Time: 11:23-11:26.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.1514.NAVI2	Well ID: TT-102D2	Sample ID: TT-102D2
Sample Date: 10/29/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 9:36 AM	Weather: Sunny Cloudy 60 F	

Purge Method: Non-Dedicated Bladder Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 740.0 to 770.0 ft	
Casing Diameter: 4 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 790 ft bmp	Pump Intake Depth: Initial: 755 ft bmp Final: N/A	
Depth to Water: 15.53 ft bmp	Purge Time: 8:32 AM to 9:32 AM	
Water Column in Well:		
Gallons in Well:	X Volumes to Remove: _____ = Total Volume to Remove: _____ Actual Volume Removed: 35 L	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
N/A	8:32 AM	N/A	N/A	15.00	5.65	0.224	301.00	2.14	0.44	N/A
N/A	8:37 AM	0.185	N/A	14.20	5.21	0.062	446.00	0.53	N/A	15.61
N/A	8:42 AM	0.185	N/A	14.20	4.92	0.039	476.00	0.50	N/A	N/A
N/A	8:47 AM	0.185	N/A	14.20	4.78	0.032	492.00	0.76	N/A	15.59
N/A	8:52 AM	0.185	N/A	14.20	4.75	0.028	520.00	0.74	0.11	N/A
N/A	8:57 AM	0.185	N/A	14.30	4.61	0.024	519.00	1.06	N/A	15.52
N/A	9:02 AM	0.132	N/A	14.30	4.60	0.023	501.00	1.25	N/A	N/A
N/A	9:07 AM	0.132	N/A	14.40	4.68	0.022	525.00	1.23	N/A	15.51
N/A	9:12 AM	0.132	N/A	14.50	4.70	0.021	513.00	1.25	1.13	N/A
N/A	9:17 AM	0.132	N/A	14.60	4.58	0.021	526.00	1.58	N/A	15.52
N/A	9:22 AM	0.132	N/A	14.60	4.50	0.020	521.00	1.32	N/A	N/A
N/A	9:27 AM	0.132	N/A	14.60	4.44	0.020	514.00	1.29	N/A	15.52
N/A	9:32 AM	0.132	9.2	14.70	4.41	0.019	511.00	1.40	0.77	N/A



Volume Purge Groundwater Sampling Log

Collected Sample Condition

Color: colorless Odor: none Appearance: clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: N/A
 Sampling Remarks: Well Wizard Box had to be adjusted to accommodate 500 ml/min flow. Sampling Time: 09:36-09:40.

Technician: Karla Miranda|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft bmp	feet below measuring point	mg/L	milligrams per liter	mV	millivolts	NTU	nephelometric turbidity units	SU	standard units
CG	clear glass	HCL	hydrochloric acid	mL/min	milliliters per minute	N/A	not available	ppm	parts per million	TOC	top of casing
F	degrees Fahrenheit	L	liters							uS/cm	microsiemens per centimeter



Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.NAVI2 **Well ID:** BPOW 1-1 **Sample ID:** BPOW 1-1
Sample Date: 12/9/2014 **Duplicate:** N/A **Other QC:** MS/MSD
Sample Time: 1:15 AM **Weather:** Windy|Raining|Cloudy 40 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	Lamotte 2020 we, SN: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	196.0 to 241.0 ft	
Casing Diameter:	4 in	Packer Depth:	169 ft bls	
PID Reading:	N/A	Packer Pressure:	110.00 psi	
Measured Well Depth:	241 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	29.70 ft bmp	Purge Time:	12:45 AM	to 1:10 PM
Water Column in Well:	72.00 ft			
Gallons in Well:	46.80 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	141.00 gal	
		Actual Volume Removed:	141 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	12:45 PM	N/A	N/A	13.00	5.04	0.079	N/A	N/A	0.72	29.59
1	12:52 PM	6.250	47.0	12.20	4.57	0.075	N/A	N/A	0.35	29.52
2	1:00 PM	6.250	94.0	12.30	4.45	0.076	N/A	N/A	0.56	29.49
3	1:10 PM	N/A	141.0	12.00	4.44	0.075	N/A	N/A	0.31	29.52

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: Other person- Derek M.
 Sampling Remarks: No PID reading at wellhead due to heavy rain event. Pump intake below packer. Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature:

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.NAVI2	Well ID:	BPOW 1-2	Sample ID: BPOW 1-2
Sample Date:	12/8/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	3:38 PM	Weather:	Cold 35 F	

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	Turbidity Meter
Measuring Point:	TOC	Serial #:	855320	Lamotte 2020we; SN 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	310.0 to 335.0 ft	
Casing Diameter:	4 in	Packer Depth:	295 ft bls	
PID Reading:	0.0 ppm	Packer Pressure:	165.00 psi	
Measured Well Depth:	335 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	30.21 ft bmp	Purge Time:	3:13 PM	to 3:37 PM
Water Column in Well:	41.00 ft			
Gallons in Well:	26.65 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	80.00 gal	
		Actual Volume Removed:	80 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	3:13 PM	N/A	N/A	12.70	5.52	0.063	N/A	N/A	0.37	29.92
1	3:25 PM	N/A	27.0	11.30	6.10	0.077	N/A	N/A	0.37	30.21
2	3:30 PM	N/A	54.0	11.20	6.10	0.067	N/A	N/A	4.28	30.58
3	3:37 PM	N/A	80.0	11.10	5.37	0.068	N/A	N/A	0.66	30.58

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: Other person- Dave M.
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589. Pump intake just below packer. Rate lowered prior to sampling.

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project:	NG Bethpage	Site Location:	Bethpage NY	
Project No:	NY001496.314I.NAVI2	Well ID:	BPOW 1-3	Sample ID: BPOW 1-3
Sample Date:	11/28/2014	Duplicate:	N/A	Other QC: N/A
Sample Time:	3:10 PM	Weather:	Cloudy Cold 39 F	

Purge Method:	Dedicated 2" Sub. Pump	Water Quality Meters:	OAKTON 300 Series Turbidity Meter
Measuring Point:	TOC	Serial #:	855320 Lamotte 2020we; SN: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	374.0 to 419.0 ft
Casing Diameter:	2 in	Packer Depth:	N/A
PID Reading:	0.0 ppm	Packer Pressure:	N/A
Measured Well Depth:	419 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A
Depth to Water:	30.58 ft bmp	Purge Time:	1:28 PM to 3:06 PM
Water Column in Well:	388.42 ft		
Gallons in Well:	62.15 gal	X Volumes to Remove:	3
		= Total Volume to Remove:	187.00 gal
		Actual Volume Removed:	187 gal

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	1:28 PM	2.000	N/A	9.30	4.41	0.101	N/A	N/A	5.88	30.72
1	2:04 PM	2.000	63.0	10.90	4.11	0.090	N/A	N/A	0.03	30.92
2	2:40 PM	2.000	126.0	10.80	4.07	0.091	N/A	N/A	0.13	30.92
3	3:06 PM	2.000	187.0	10.70	4.15	0.092	N/A	N/A	0.02	30.92

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: Dedicated rediflow pump. Pump lifted 30 feet prior to purging. Pump set 4-5 feet above screen zone. Rate lowered prior to sampling.
 Sampling Remarks: PID MiniRae 2000; SN: 110-011589

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage **Site Location:** Bethpage NY
Project No: NY001496.314I.NAVI2 **Well ID:** BPOW 1-4 **Sample ID:** BPOW 1-4
Sample Date: 12/10/2014 **Duplicate:** N/A **Other QC:** N/A
Sample Time: 12:46 PM **Weather:** Cold|Scattered Showers 40 F

Purge Method:	Dedicated 3" Sub. Pump	Water Quality Meters:	OAKTON 300 Series	LaMotte 2020
Measuring Point:	TOC	Serial #:	855322	LaMotte 2020we: 1810-0412
Casing Material:	PVC sch 80	Screen Interval:	340.0 to 400.0 ft	
Casing Diameter:	4 in	Packer Depth:	330 ft bls	
PID Reading:	N/A	Packer Pressure:	186.53 psi	
Measured Well Depth:	405 ft bmp	Pump Intake Depth:	Initial: N/A Final: N/A	
Depth to Water:	12.48 ft bmp	Purge Time:	12:25 PM	to 12:46 PM
Water Column in Well:	75.00 ft			
Gallons in Well:	48.75 gal	X Volumes to Remove:	3	
		= Total Volume to Remove:	146.25 gal	
		Actual Volume Removed:	147 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	12:25 PM	0.000	0.0	13.00	5.00	0.065	N/A	0.00	0.13	13.15
1	12:32 PM	8.000	49.0	11.20	3.90	0.063	N/A	N/A	0.05	12.88
2	12:39 PM	8.000	98.0	10.80	3.59	0.064	N/A	N/A	0.12	13.49
3	12:46 PM	8.000	147.0	10.80	3.36	0.065	N/A	N/A	0.14	14.69

Collected Sample Condition

Color: colorless **Odor:** moderate **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: Other Technician: Derek Matuszewski. Dedicated transducer in well; entered well w/ WL probe at 11:34. PSI calculated using stand. formula; 190psi used. Dedicated plug is outward.
 Sampling Remarks: No PID screen at well head due to rain. Volume measured in 55 gal/ldrums; therefore, parameters ev. 49 gal. Rate lowered prior to sampling.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	N/A	not available	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	mg/L	milligrams per liter	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 1-5	Sample ID: BPOW 1-5
Sample Date: 12/11/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 11:19 AM	Weather: Cloudy Cold Snowing 35 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	LaMotte 2020 we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 600.0 to 650.0 ft	
Casing Diameter: 4 in	Packer Depth: 490 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 255.10 psi	
Measured Well Depth: 655 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 12.76 ft bmp	Purge Time: 9:45 AM	to 11:18 AM
Water Column in Well: 105.00 ft		
Gallons in Well: 107.50 gal	Volumes to Remove: 3	
	Total Volume to Remove: 321.75 gal	
	Actual Volume Removed: 324 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	9:45 AM	0.000	0.0	12.60	6.20	0.024	N/A	N/A	0.81	12.76
1	9:57 AM	8.000	108.0	11.00	5.72	0.020	N/A	N/A	0.82	13.05
2	10:10 AM	8.000	216.0	10.40	5.04	0.017	N/A	N/A	4.48	13.09
3	11:18 AM	9.000	324.0	10.70	6.19	0.017	N/A	N/A	4.99	13.03

Collected Sample Condition

Color: colorless **Odor:** moderate **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	BPOW 1-6 tubing setup used

Comments

General Comments: Other Technician: Derek Matuszewski. Dedicated transducer in well, therefore MP open and equilibrated w/ ambient prior to PID screen; entered well at 9:14. PSI calculated using stand. formula; 256 psi used. Dedicated electrical plug is outward facing.
 Sampling Remarks: Volume measured in 55 gal/ldrums; therefore, parameters ev. 108 gal. Rate lowered prior to sampling.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 1-6	Sample ID: BPOW 1-6
Sample Date: 12/11/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:18 PM	Weather: Cold 34 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: LaMotte 2020	OAKTON 300 Series
Measuring Point: TOC	Serial #: Lamotte 2020we: 1810-0412	855322
Casing Material: PVC sch 80	Screen Interval: 700.0 to 750.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 256.00 psi	
Measured Well Depth: 755 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 13.08 ft bmp	Purge Time: 1:12 PM	to 4:15 PM
Water Column in Well: 265.00 ft		
Gallons in Well: 172.25 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 516.75 gal	
	Actual Volume Removed: 519 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	1:12 PM	9.000	0.0	13.40	6.83	0.019	N/A	N/A	0.74	13.08
1	1:32 PM	9.000	173.0	11.70	5.22	0.016	N/A	N/A	10.62	13.78
2	3:03 PM	9.000	346.0	10.30	5.74	0.016	N/A	N/A	2.46	13.78
3	4:15 PM	9.000	519.0	11.30	4.85	0.015	N/A	N/A	1.64	13.79

Collected Sample Condition

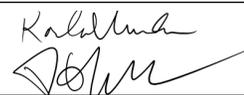
Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Replaced sampling port tubing on dedicated well stickup for BPOW 1-6 after using it to purge BPOW 1-5.

Comments

General Comments: Other Technician: Derek Matuszewski. Dedicated transducer in well, therefore MP open and equilibrated w/ ambient prior to PID screen; entered well at ~12:50. PSI calculated using stand. formula; 256 psi used. Dedicated electrical plug is outward facing.
 Sampling Remarks: Volume measured in 55 gal/ldrums; therefore, parameters ev. 173 gal. Rate lowered prior to sampling.

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 2-1	Sample ID: BPOW 2-1
Sample Date: 11/28/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 6:40 PM	Weather: Cloudy Cold 39 F	

Purge Method: Dedicated 2" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Lamotte 2020we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 360.0 to 400.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: N/A	
Measured Well Depth: 400 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 20.22 ft bmp	Purge Time: 4:50 PM to 6:36 PM	
Water Column in Well: 379.78 ft		
Gallons in Well: 60.80 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 183.00 gal	
	Actual Volume Removed: 183 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	4:50 PM	2.000	N/A	12.60	4.58	0.059	N/A	N/A	9.52	20.42
1	5:14 PM	2.000	61.0	12.60	4.55	0.052	N/A	N/A	0.02	20.28
2	5:56 PM	2.000	122.0	12.50	4.43	0.051	N/A	N/A	0.09	20.38
3	6:36 PM	2.000	183.0	12.70	4.60	0.050	N/A	N/A	0.03	20.38

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** cloudy

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Dedicated rediflow pump. Pump pulled up 25 feet to set pump 5 feet above screen. Rate lowered prior to sampling.

Comments

General Comments: Transducer in well. Upper dedicated tubing crimped in several places.
 Sampling Remarks: PID Minirae 2000; SN: 110-011589

Technician: Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 2-2	Sample ID: BPOW 2-2
Sample Date: 12/12/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 10:15 AM	Weather: Cloudy Cold 30 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	LaMotte 2020
Measuring Point: TOC	Serial #: 855322	2020we: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 455.0 to 495.0 ft	
Casing Diameter: 2 in	Packer Depth: N/A	
PID Reading: 0.0 ppm	Packer Pressure: 0.00 psi	
Measured Well Depth: 495 ft bmp	Pump Intake Depth: Initial: 85 ft bmp Final: 85 ft bmp	
Depth to Water: 19.26 ft bmp	Purge Time: 9:15 AM to 10:14 AM	
Water Column in Well: 475.74 ft		
Gallons in Well: 76.11 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 228.00 gal	
	Actual Volume Removed: 228 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	9:15 AM	0.000	0.0	12.20	5.84	0.062	N/A	N/A	3.56	19.26
1	9:36 AM	3.000	76.0	12.10	4.35	0.066	N/A	N/A	0.17	20.75
2	9:49 AM	3.000	152.0	12.20	4.15	0.067	N/A	N/A	1.19	20.86
3	10:14 AM	3.000	228.0	11.90	3.62	0.068	N/A	N/A	0.99	20.04

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Volume measured in 55 gal/drum; therefore, parameters ev. 76 gal. Rate lowered prior to sampling.

Comments

General Comments: Other Technician: Derek Matuszewski. Dedicated transducer in well; transducer removed from well at ~8:45, returned at ~10:25. New 1/2" poly tubing used to purge/sample well; pump lowered and set at 85 ft bgs. Sampling Remarks: N/A

Technician: Karla Miranda

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 2-3	Sample ID: BPOW 2-3
Sample Date: 11/26/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 3:15 PM	Weather: Cold Raining Windy 40 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Lamotte 2020we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 564.0 to 594.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: N/A	Packer Pressure: 257.00 psi	
Measured Well Depth: 599 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 20.00 ft bmp	Purge Time: 2:40 PM to 3:13 PM	
Water Column in Well: 99.00 ft		
Gallons in Well: 64.35 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 194.00 gal	
	Actual Volume Removed: 195 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	2:40 PM	N/A	N/A	14.50	5.11	0.045	N/A	N/A	0.64	20.18
1	2:53 PM	6.800	65.0	11.70	4.87	0.045	N/A	N/A	0.72	20.00
2	3:04 PM	6.800	130.0	12.00	4.80	0.046	N/A	N/A	0.01	20.00
3	3:13 PM	8.000	195.0	11.70	4.85	0.046	N/A	N/A	0.03	20.00

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Rate lowered prior to sampling. Pump intake just below packer.

Comments

General Comments: No PID reading due to rain. Transducer in well.
Sampling Remarks: No cap on TOC. Cap stuck around riser.

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 3-1	Sample ID: BPOW 3-1
Sample Date: 11/20/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 12:40 PM	Weather: Cloudy 50 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: N/A	N/A
Measuring Point: N/A	Serial #: N/A	N/A
Casing Material: PVC sch 80	Screen Interval: 446.0 to 516.0 ft	
Casing Diameter: 4 in	Packer Depth: 414 ft bls	
PID Reading: N/A	Packer Pressure: 220.00 psi	
Measured Well Depth: 516 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: N/A	Purge Time: 12:23 AM to 11:59 PM	
Water Column in Well: 102.00 ft		
Gallons in Well: 66.30 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 199.00 gal	
	Actual Volume Removed: 200 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	12:40 PM	5.500	N/A	13.60	3.24	0.116	N/A	N/A	N/A	28.50
1	12:11 AM	5.500	67.0	12.20	3.86	0.114	N/A	N/A	N/A	31.80
2	11:59 PM	5.500	133.0	12.30	3.94	0.118	N/A	N/A	N/A	31.80
3	12:39 PM	5.500	200.0	12.00	3.84	0.121	N/A	N/A	0.61	31.52

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Rate lowered prior to sampling.

Comments

General Comments: Open DTW port.
 Sampling Remarks: N/A

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	SU	standard units	uS/cm	microsiemens per centimeter
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	psi	pounds per square inch	TOC	top of casing		
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 3-2	Sample ID: BPOW 3-2
Sample Date: 11/20/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 4:59 PM	Weather: Sunny Cold Cloudy Windy 45 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter: Lamotte 2020we; SN: 1810-0412
Measuring Point: TOC	Serial #: 486059	
Casing Material: PVC sch 80	Screen Interval: 612.0 to 647.0 ft	
Casing Diameter: 4 in	Packer Depth: 503 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 255.00 psi	
Measured Well Depth: 647 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 26.71 ft bmp	Purge Time: 4:06 PM to 4:57 PM	
Water Column in Well: 144.00 ft		
Gallons in Well: 93.60 gal	X Volumes to Remove: 3 = Total Volume to Remove: 281.00 gal Actual Volume Removed: 281 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	4:06 PM	5.000	N/A	13.40	4.96	0.053	N/A	N/A	1.99	27.03
1	4:23 PM	5.500	94.0	11.40	4.82	0.082	N/A	N/A	10.60	26.32
2	4:39 PM	5.500	188.0	11.10	4.82	0.070	N/A	N/A	14.40	25.95
3	4:57 PM	N/A	281.0	10.70	4.89	0.067	N/A	N/A	5.48	25.52

Collected Sample Condition

Color: colorless **Odor:** slight **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: Transducer in well.
 Sampling Remarks: Pump intake just below packer. Parameter every 94 gallons. Rate lowered prior to sampling.

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 3-3	Sample ID: BPOW 3-3
Sample Date: 11/25/2014	Duplicate: N/A	Other QC: N/A
Sample Time: 2:01 PM	Weather: Cloudy 65 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Lamotte 2020we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 580.0 to 620.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 255.00 psi	
Measured Well Depth: 625 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 23.43 ft bmp	Purge Time: 1:15 PM	to 1:58 PM
Water Column in Well: 135.00 ft		
Gallons in Well: 87.75 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 264.00 gal	
	Actual Volume Removed: 264 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	1:15 PM	8.300	N/A	12.80	6.04	0.095	N/A	N/A	0.47	23.73
1	1:26 PM	8.300	88.0	12.30	4.73	0.052	N/A	N/A	0.05	23.65
2	1:36 PM	8.300	176.0	12.10	4.35	0.049	N/A	N/A	0.28	23.63
3	1:58 PM	8.000	264.0	12.00	4.14	0.049	N/A	N/A	0.01	23.63

Collected Sample Condition

Color: colorless **Odor:** strong **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	N/A

Comments

General Comments: Transducer in well.
 Sampling Remarks: Rate lowered prior to sampling. Pump intake below packer. PID MiniRae 2000; SN: 110-011589.

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

Volume Purge Groundwater Sampling Log

Project: NG Bethpage	Site Location: Bethpage NY	
Project No: NY001496.314I.NAVI2	Well ID: BPOW 3-4	Sample ID: BPOW 3-4
Sample Date: 11/26/2014	Duplicate: Rep 112614KV1	Other QC: N/A
Sample Time: 12:41 PM	Weather: Cloudy Hail Raining 40 F	

Purge Method: Dedicated 3" Sub. Pump	Water Quality Meters: OAKTON 300 Series	Turbidity Meter
Measuring Point: TOC	Serial #: 855320	Lamotte 2020we; SN: 1810-0412
Casing Material: PVC sch 80	Screen Interval: 640.0 to 690.0 ft	
Casing Diameter: 4 in	Packer Depth: 500 ft bls	
PID Reading: 0.0 ppm	Packer Pressure: 250.00 psi	
Measured Well Depth: 695 ft bmp	Pump Intake Depth: Initial: N/A Final: N/A	
Depth to Water: 25.72 ft bmp	Purge Time: 10:02 AM to 12:39 PM	
Water Column in Well: 205.00 ft		
Gallons in Well: 133.25 gal	X Volumes to Remove: 3	
	= Total Volume to Remove: 400.00 gal	
	Actual Volume Removed: 400 gal	

Field Parameter Measurements During Purging

Purge Volume	Time	Flow Rate (gal/min)	Cuml Vol Purged (gal)	Temp (C)	pH (SU)	Spec Cond (mS/cm)	ORP (mV)	DO (mg/L)	Turb (NTU)	DTW (ft)
Initial	10:02 AM	4.500	N/A	12.70	5.77	0.056	N/A	N/A	0.22	25.66
1	10:35 AM	5.000	134.0	11.70	5.73	0.035	N/A	N/A	1.06	25.70
2	12:15 PM	5.000	268.0	11.70	4.90	0.034	N/A	N/A	1.46	25.66
3	12:39 PM	5.000	400.0	11.20	4.87	0.035	N/A	N/A	1.30	25.66

Collected Sample Condition

Color: colorless **Odor:** none **Appearance:** clear

Parameter	Container	# of Containers	Preservative	Comments
TCL VOC (EPA 524.2)	40 mL CG	3	HCL	Pump intake below packer.

Comments

General Comments: Transducer in well.
 Sampling Remarks: Rate lowered prior to sampling. PID MiniRae 2000; SN: 110-011589

Technician: Kirk Vargas|Patricia Prezorski

Signature: 

Abbreviations:

C	degrees Celsius	ft	feet	HCL	hydrochloric acid	NTU	nephelometric turbidity units	psi	pounds per square inch	TOC	top of casing
CG	clear glass	ft bmp	feet below measuring point	N/A	not available	ppm	parts per million	SU	standard units	uS/cm	microsiemens per centimeter
F	degrees Fahrenheit	gal	gallons								

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Appendix B

Groundwater Monitoring Data for
Fourth Quarter 2014

Table B1. Concentrations of Volatile Organic Compounds in Groundwater Monitoring Wells, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in µg/L)	NYSDEC Standards Criteria and Guidance Values (µg/l) ⁽¹⁾	Well:	GM-15S	GM-15I	GM-15D	GM-15D2	GM-17I	GM-17D	GM-18I	GM-18D
		Sample ID: Date:	GM-15S 10/20/2014	GM-15I 10/20/2014	GM-15D 10/20/2014	GM-15D3 10/20/2014	GM-17I 10/23/2014	GM-17D 10/23/2014	GM-18I 10/15/2014	GM-18D 10/15/2014
1,1,1-Trichloroethane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	5		< 1	< 1	< 1	0.87 J	< 1	< 1	< 1	< 1
1,2-Dichloroethane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Butanone (MEK)	50		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone (MBK)	50		< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-methyl-2-pentanone (MIK)	50		< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acetone	50		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	50		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	50		< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	5		< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Disulfide	50		< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon tetrachloride	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform	7		< 1	< 1	< 1	0.21 J	< 1	< 1	< 1	< 1
Chloromethane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	5		< 1	< 1	< 1	< 1	< 1	1.5	0.83 J	< 1
cis-1,3-dichloropropene	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Methylene Chloride	5		< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Styrene	5		< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5		< 1	< 1	< 1	5.5	< 1	< 1	< 1	< 1
Toluene	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-dichloroethene	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-dichloropropene	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	5		2.2	< 1	< 1	9.5	0.76 J	0.30 J	0.31 J	0.75 J
Trichlorotrifluoroethane (Freon 113)	5		< 5	< 5	< 5	0.87 J	< 5	< 5	< 5	< 5
Vinyl Chloride	2		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylene-o	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylenes - m,p	5		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total VOCs			2.2	0	0	17	0.76	0.30	1.8	1.6

See Notes and Abbreviations on last page

Table B1. Concentrations of Volatile Organic Compounds in Groundwater Monitoring Wells, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in µg/L)	NYSDEC Standards Criteria and Guidance Values (µg/l) ⁽¹⁾	Well:	GM-33D2	GM-33D2	GM-34D	GM-34D	GM-34D2	GM-34D2	GM-35D2	GM-38D	GM-38D2
		Sample ID:	GM-33D2	REP102114KM1	GM-34D	REP101614KM1	GM-34D2	GM-34D2	GM-35D2	GM-38D	GM-38D2
		Date:	10/21/2014	10/21/2014	10/16/2014	10/16/2014	10/16/2014	10/16/2014	10/22/2014	10/22/2014	10/22/2014
1,1,1-Trichloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.81 J	0.53 J
1,1,2,2-Tetrachloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	5	< 1	< 1	0.77 J	0.76 J	< 1	< 1	< 1	1.4	3.4	< 1
1,1-Dichloroethene	5	< 1	< 1	4.1	4.0	0.98 J	< 1	< 1	2.1	1.1	< 1
1,2-Dichloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.1	< 1	< 1
1,2-Dichloropropane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Butanone (MEK)	50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone (MBK)	50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-methyl-2-pentanone (MIK)	50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acetone	50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	50	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	50	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Disulfide	50	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon tetrachloride	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform	7	< 1	< 1	0.42 J	0.41 J	< 1	< 1	< 1	0.40 J	0.75 J	< 1
Chloromethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	5	< 1	< 1	7.6	7.5	2.8	< 1	< 1	1.3	0.99 J	< 1
cis-1,3-dichloropropene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Methylene Chloride	5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Styrene	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5	3.6	4.0	6.8	6.6	7.4	5.7	7.4	< 1	< 1	< 1
Toluene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-dichloroethene	5	< 1	< 1	< 1	< 1	0.55 J	< 1	< 1	< 1	< 1	< 1
trans-1,3-dichloropropene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	5	28.7	31.0	360 D	363 D	157	78.7	302	34.3	< 5	< 5
Trichlorotrifluoroethane (Freon 113)	5	6.0	6.8	8.1	7.8	0.98 J	1.1 J	1.9 J	< 5	< 5	< 5
Vinyl Chloride	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylene-o	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylenes - m,p 0.6	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total VOCs			38	42	388	390	170	86	319	41	

See Notes and Abbreviations on last page

Table B1. Concentrations of Volatile Organic Compounds in Groundwater Monitoring Wells, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in µg/L)	NYSDEC Standards Criteria and Guidance Values (µg/l) ⁽¹⁾	Well:	GM-39DA	GM-39DB	GM-73D	GM-73D2	GM-74I	GM-74D	GM-74D2	GM-75D2
		Sample ID:	GM-39DA	GM-39DB	GM-73D	GM-73D2	GM-74I	GM-74D	GM-74D2	GM-75D2
		Date:	10/15/2014	10/15/2014	10/17/2014	10/17/2014	10/17/2014	10/17/2014	10/17/2014	10/21/2014
1,1,1-Trichloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	5	< 1	< 1	< 1	0.66 J	< 1	< 1	0.40 J	< 1	< 1
1,1-Dichloroethene	5	< 1	< 1	< 1	1.2	< 1	< 1	0.72 J	< 1	< 1
1,2-Dichloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Butanone (MEK)	50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone (MBK)	50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-methyl-2-pentanone (MIK)	50	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acetone	50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	50	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	50	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Disulfide	50	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon tetrachloride	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform	7	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	5	0.60 J	< 1	< 1	0.65 J	< 1	< 1	< 1	< 1	< 1
cis-1,3-dichloropropene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Methylene Chloride	5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Styrene	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	5	< 1	< 1	< 1	1.9	< 1	< 1	2.9	1.3	< 1
Toluene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-dichloroethene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-dichloropropene	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	5	0.66 J	52.7	14.2	40.0	0.63 J	0.99 J	7.2	39.1	< 5
Trichlorotrifluoroethane (Freon 113)	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylene-o	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Xylenes - m,p	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total VOCs			1.3	53	14	44	0.63	0.99	11	40

See Notes and Abbreviations on last page

Table B1. Concentrations of Volatile Organic Compounds in Groundwater Monitoring Wells, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in µg/L)	NYSDEC Standards Criteria and Guidance Values (µg/l) ⁽¹⁾	Well:	GM-79I	GM-79D	N-10631	TT-101D ⁽²⁾	TT-101D1 ⁽²⁾	TT-101D2 ⁽²⁾
		Sample ID:	GM-79I	GM-79D	N-10631	TT-101D	TT-101D1	TT-101D2
		Date:	10/24/2014	10/24/2014	10/21/2014	9/25/2014	9/25/2014	9/25/2014
1,1,1-Trichloroethane	5		< 1	< 1	< 1	0.42 J	0.62 J	0.49 J
1,1,2,2-Tetrachloroethane	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	5		< 1	< 1	< 1	< 0.5	0.4 J	0.63 J
1,1-Dichloroethane	5		< 1	< 1	< 1	0.85 J	0.74 J	0.92 J
1,1-Dichloroethene	5		< 1	< 1	< 1	4	4.7	5.7
1,2-Dichloroethane	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	50		< 10	< 10	< 10	< 2.5	< 2.5	< 2.5
2-Hexanone (MBK)	50		< 5	< 5	< 5	< 2.5	< 2.5	< 2.5
4-methyl-2-pentanone (MIK)	50		< 5	< 5	< 5	< 2.5	< 2.5	< 2.5
Acetone	50		< 10	< 10	< 10	< 2.5 J	< 2.5 J	< 2.5 J
Benzene	1		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Bromodichloromethane	50		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Bromoform	50		< 4	< 4	< 4	< 0.5	< 0.5	< 0.5
Bromomethane	5		< 2	< 2	< 2	< 1	< 1	< 1
Carbon Disulfide	50		< 2	< 2	< 2	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	5		< 1	< 1	< 1	< 0.5	0.94 J	< 0.5
Chlorobenzene	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Chloroethane	5		< 1	< 1	< 1	< 1	< 1	< 1
Chloroform	7		< 1	< 1	< 1	0.47 J	0.93 J	0.93 J
Chloromethane	5		< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	5		< 1	< 1	< 1	3.3	2	2.2
cis-1,3-dichloropropene	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Dibromochloromethane	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Ethylbenzene	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Methylene Chloride	5		< 2	< 2	< 2	< 2.5	< 2.5	< 2.5
Styrene	5		< 5	< 5	< 5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Toluene	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
trans-1,2-dichloroethene	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
trans-1,3-dichloropropene	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Trichloroethylene	5		< 1	15.5	0.89 J	66	160	560
Trichlorotrifluoroethane (Freon 113)	5		< 5	< 5	< 5	20	16	22
Vinyl Chloride	2		< 1	< 1	< 1	< 1	< 1	< 1
Xylene-o	5		< 1	< 1	< 1	< 0.5	< 0.5	< 0.5
Xylenes - m,p	5		< 1	< 1	< 1	< 1	< 1	< 1
Total VOCs			0	16	0.89	95	190	590

Notes and Abbreviations:

- ⁽¹⁾ Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent values are listed.
 - ⁽²⁾ TT-101D, TT-101D1 and TT-101D2 were sampled by NAVY in the Fourth Quarter 2014. Validated results are provided by NAVY.
- Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2014).
 Samples analyzed for the TCL VOCs using USEPA Method 8260C.
 Total VOCs are rounded to two significant figures.
Bold value indicates a detection.

 	Compound detected in exceedance of NYSDEC SCG Criteria
D	Concentration is based on a diluted sample analysis
J	Value is estimated concentration
NYSDEC	New York State Department of Environmental Conservation
REP	Blind duplicate Sample
TCL	Target Compound List
TOGs	Technical and Operational Guidance Series
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
µg/L	Micrograms per liter
< 1.0	Compound not detected above its laboratory quantification limit

Table B2. Concentrations of Metals in Groundwater Monitoring Wells, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in µg/L)	NYSDEC Standards Criteria and Guidance Values (µg/L) ⁽¹⁾	Well:	GM-15S	MW-01GF	MW-02GF	PT1 MW-4	PT1 MW-5	PT1 MW-6	N-10631
		Sample ID:	GM-15S	MW-01GF	MW-02GF	PT1 MW-4	PT1 MW-5	PT1 MW-6	N-10631
		Date:	10/20/2014	10/16/2014	10/20/2014	10/16/2014	10/16/2014	10/16/2014	10/21/2014
Cadmium	5		--	< 3.0	< 3.0	--	--	--	9.2
Cadmium (Dissolved)	5		--	< 3.0	< 3.0	--	--	--	6.3
Chromium	50		862	< 10	17.9	< 10	606	176	30.6
Chromium (Dissolved)	50		848	< 10	15.8	< 10	609	170	10.8

Notes and Abbreviations:

⁽¹⁾ Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Bold value indicates a detection

 	Compound detected in exceedance of NYSDEC SCG Criteria
NYSDEC	New York State Department of Environmental Conservation
TOGs	Technical Operational and Guidance Series
µg/L	Micrograms per liter
--	Not analyzed
< 3.0	Compound not detected above its laboratory quantification limit

Table B3. Concentrations of Site-Related Volatile Organic Compounds in Outpost Wells, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT ⁽¹⁾ (units in ug/L)	NYSDEC Standards, Criteria, and Guidance Values (ug/L) ⁽²⁾	Well:	BPOW 1-1	BPOW 1-2	BPOW 1-3	BPOW 1-4 ⁽³⁾	BPOW 1-5 ⁽³⁾	BPOW 1-6 ⁽³⁾	BPOW 2-1
		Sample ID: Date:	BPOW 1-1 12/9/2014	BPOW 1-2 12/8/2014	BPOW 1-3 11/28/2014	BPOW 1-4 12/10/2014	BPOW 1-5 12/11/2014	BPOW 1-6 12/11/2014	BPOW 2-1 11/28/2014
1,1,1-Trichloroethane	5		0.33 J	0.17 J	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	5		0.10 J	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	5		0.29 J	0.20 J	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	7		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-dichloroethene	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorotrifluoroethane (Freon 113)	5		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-dichloroethene	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethylene	5		1.0	0.37 J	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Site-Related VOCs⁽⁴⁾			1.7⁽⁶⁾	0.74	0.0	0.0	0.0	0.0	0.0
TVOC Trigger Value⁽⁵⁾			0.6	0.6	0.6	NE	NE	NE	NE

See notes and abbreviations on last page

Table B3. Concentrations of Site-Related Volatile Organic Compounds in Outpost Wells, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (units in ug/L)	NYSDEC	BPOW 2-2	BPOW 2-3	BPOW 3-1	BPOW 3-2	BPOW 3-3 ⁽³⁾	BPOW 3-4 ⁽³⁾	BPOW 3-4 ⁽³⁾
	Standards, Criteria, and Guidance Values (ug/L) ⁽²⁾	BPOW 2-2 12/12/2014	BPOW 2-3 11/26/2014	BPOW 3-1 11/20/2014	BPOW 3-2 11/20/2014	BPOW 3-3 11/25/2014	BPOW 3-4 11/26/2014	REP112614KV1 11/26/2014
1,1,1-Trichloroethane	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.62	0.63
1,1-Dichloroethane	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.43 J	0.43 J
1,2-Dichloroethane	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.78	0.74
Chlorobenzene	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.1	1.1
cis-1,2-dichloroethene	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.86	0.83
Trichlorotrifluoroethane (Freon 113)	5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.45 J	0.43 J
Tetrachloroethene	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-dichloroethene	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethylene	5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	74.6 DJ	49.7 DJ
Total Site-Related VOCs ⁽⁴⁾		0.0	0.0	0.0	0.0	0.0	79	54
TVOC Trigger Value ⁽⁵⁾		NE	NE	1.5	1.5	NE	NE	NE

See notes and abbreviations on last page

Table B3. Concentrations of Site-Related Volatile Organic Compounds in Outpost Wells, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Notes and Abbreviations:

Samples analyzed for site-related VOCs per the PWSCP (ARCADIS G&M, Inc. 2003) using USEPA Method 524.2

- (1) Additional VOCs were inadvertently analyzed by the analytical laboratory at eleven outpost wells (BPOW 1-1, BPOW 1-2, BPOW 1-3, BPOW 1-4, BPOW 1-5, BPOW 2-1, BPOW 2-3, BPOW 3-1, BPOW 3-2, BPOW 3-3 and BPOW 3-4). Results for the additional VOCs analyzed at these wells were non-detect with a few exceptions (benzene, acetone and chloromethane). These three constituents were detected at estimated concentrations below the reporting limits and were limited to three wells (BPOW1-4, BPOW 1-5 and BPOW 2-1). Two of these three constituents (acetone and chloromethane) are common laboratory contaminants.
- (2) Standards, Criteria, and Guidance (SCGs) vales based on the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) are based on the NYSDEC TOGs (NYSDEC 1998); most stringent values listed.
- (3) Wells BPOW1-4, BPOW1-5, BPOW1-6, BPOW3-3, and BPOW3-4 are currently monitored by Northrop Grumman on a voluntary basis. The screen intervals for these wells were selected by the Navy based on data obtained from vertical profile borings VP-127 (BPOW-1 cluster) and VP-128 (BPOW-3 cluster).
- (4) Site-related VOCs were established for the wells identified above in the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003).
- (5) TVOC Trigger Values were established for Wells BPOW1-1, BPOW1-2, BPOW1-3, BPOW3-1, BPOW3-2, BPOW4-1, and BPOW4-2 in the PWSCP (ARCADIS G&M, Inc. 2003). Established trigger values have been previously exceeded (except for BPOW 3-1 and BPOW 3-2) and no longer apply as goal of the PWSCP has been met. Wells BPOW 4-1 and BPOW 4-2 were not sampled this round due to ongoing NAVY abandonment of these wells and installation of replacement wells.
- (6) The TVOC Trigger Value for Cluster 1 was initially exceeded on April 23, 2004; confirmatory sampling and reporting was conducted as per the PWSCP (ARCADIS G&M, Inc. 2003).

Total site-related VOCs rounded to two significant figures.

Bold value indicates a detection.

 	Compound detected in exceedance of NYSDEC SCG Criteria
NYSDEC	New York State Department of Environmental Conservation
TOGs	Technical Operational and Guidance Series
TVOCs	Total Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
ug/L	Micrograms per liter
<0.5	Compound not detected above its laboratory quantification limit
NE	Not Established
D	Concentration is based on a diluted smaple analysis
J	Value is estimated concentration

Table B4. Concentrations of Volatile Organic Compounds in Blank Samples, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Location ID:	Field Blank ⁽¹⁾	Field Blank ⁽¹⁾	Field Blank ⁽¹⁾	Field Blank ⁽²⁾	Field Blank ⁽¹⁾	Field Blank ⁽¹⁾
	Sample ID:	FB101614KM1	FB102014KM1	FB102114KM1	FB121214KM1	TB101514KM1	TB101614KM1
	Sample Date:	10/16/2014	10/20/2014	10/21/2014	12/12/2014	10/15/2014	10/16/2014
1,1,1-Trichloroethane		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
1,1-Dichloroethane		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
1,1-Dichloroethene		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
2-Butanone		< 10	< 10	< 10	--	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0	--	< 5.0	< 5.0
4-Methyl-2-Pentanone		< 5.0	< 5.0	< 5.0	--	< 5.0	< 5.0
Acetone		< 10	< 10	< 10	--	< 10	< 10
Benzene		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
Bromodichloromethane		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
Bromoform		< 4.0	< 4.0	< 4.0	--	< 4.0	< 4.0
Bromomethane		< 2.0	< 2.0	< 2.0	--	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0	--	< 2.0	< 2.0
Carbon Tetrachloride		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
Chloroform		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
Chloromethane		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
cis-1,2-Dichloroethene		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
cis-1,3-Dichloropropene		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
Chlorodibromomethane		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
Dichloromethane		< 2.0	< 2.0	< 2.0	--	< 2.0	< 2.0
Styrene (Monomer)		< 5.0	< 5.0	< 5.0	--	< 5.0	< 5.0
Tetrachloroethene		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
Toluene		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
trans-1,2-Dichloroethene		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
trans-1,3-Dichloropropene		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
Trichloroethene		< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0
Vinyl chloride		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
o-Xylene		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
m,p-Xylene		< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0
Total VOCs		0	0	0	0	0	0

See notes and abbreviations on last page.

Table B4. Concentrations of Volatile Organic Compounds in Blank Samples, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Location ID:	Trip Blank ⁽¹⁾					
	Sample ID:	TB101714KM1	TB102014LM1	TB102114KM1	TB102214KM1	TB102314KM 1	TB102414KM1
	Sample Date:	10/17/2014	10/20/2014	10/21/2014	10/22/2014	10/23/2014	10/24/2014
1,1,1-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone		< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Methyl-2-Pentanone		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Acetone		< 10	< 10	< 10	< 10	< 10	< 10
Benzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Bromomethane		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Tetrachloride		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Styrene (Monomer)		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl chloride		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total VOCs		0	0	0	0	0	0

See notes and abbreviations on last page.

Table B4. Concentrations of Volatile Organic Compounds in Blank Samples, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Location ID:	Trip Blank ⁽¹⁾	Trip Blank ⁽²⁾				
	Sample ID:	TB102914KM1	TB112014KV1	TB112514KV1	TB112814PP1	TB120814DM1_20141208	TB120914DM1
	Sample Date:	10/29/2014	11/20/2014	11/26/2014	11/28/2014	12/8/2014	12/9/2014
1,1,1-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone	< 5.0	< 5.0	0.36J	< 5.0	< 5.0	< 5.0	< 5.0
2-Hexanone	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4-Methyl-2-Pentanone	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Acetone	< 5.0	< 5.0	0.90J	< 5.0	0.85J	< 5.0	< 5.0
Benzene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Disulfide	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	< 0.5	< 0.5	0.22J	0.19J	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorodibromomethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichloromethane	< 0.5	< 0.5	0.10J	0.12J	< 0.5	< 0.5	< 0.5
Styrene (Monomer)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-trichloro-1,2,2-trifluoroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
m,p-Xylene	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total VOCs		0	0	1.6	0.31	0.85	0

See notes and abbreviations on last page.

Table B4. Concentrations of Volatile Organic Compounds in Blank Samples, Fourth Quarter 2014, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Constituent (units in µg/L)	Location ID:	Trip Blank ⁽²⁾	Trip Blank ⁽²⁾	Trip Blank ⁽²⁾
	Sample ID:	TB121014KM1	TB121114KM1	TB121214KM1
	Sample Date:	12/10/2014	12/11/2014	12/12/2014
1,1,1-Trichloroethane		< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane		< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane		< 0.5	< 0.5	< 0.5
1,1-Dichloroethane		< 0.5	< 0.5	< 0.5
1,1-Dichloroethene		< 0.5	< 0.5	< 0.5
1,2-Dichloroethane		< 0.5	< 0.5	< 0.5
1,2-Dichloropropane		< 0.5	< 0.5	--
2-Butanone		< 5.0	< 5.0	--
2-Hexanone		< 2.0	< 2.0	--
4-Methyl-2-Pentanone		< 2.0	< 2.0	--
Acetone		1.9J	< 5.0	--
Benzene		< 0.5	< 0.5	--
Bromodichloromethane		< 0.5	< 0.5	--
Bromoform		< 0.5	< 0.5	--
Bromomethane		< 0.5	< 0.5	--
Carbon Disulfide		< 0.5	< 0.5	--
Carbon Tetrachloride		< 0.5	< 0.5	< 0.5
Chlorobenzene		< 0.5	< 0.5	< 0.5
Chloroethane		< 0.5	< 0.5	--
Chloroform		< 0.5	< 0.5	< 0.5
Chloromethane		< 0.5	< 0.5	--
cis-1,2-Dichloroethene		< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene		< 0.5	< 0.5	--
Chlorodibromomethane		< 0.5	< 0.5	--
Ethylbenzene		< 0.5	< 0.5	--
Dichloromethane		0.10J	< 0.5	--
Styrene (Monomer)		< 0.5	< 0.5	--
Tetrachloroethene		< 0.5	< 0.5	< 0.5
Toluene		< 0.5	< 0.5	--
trans-1,2-Dichloroethene		< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene		< 0.5	< 0.5	--
Trichloroethene		< 0.5	< 0.5	< 0.5
1,1,2-trichloro-1,2,2-trifluoroethane		< 1.0	< 1.0	< 1.0
Vinyl chloride		< 0.5	< 0.5	--
o-Xylene		< 5.0	< 5.0	< 5.0
m,p-Xylene		< 5.0	< 5.0	< 5.0
Total VOCs		2.0	0	0

Notes and Abbreviations

Above analyte list represents aggregation of all VOCs analyzed for using the two laboratory methods specified below.

⁽¹⁾ Sample analysis by USEPA Method 8260C

⁽²⁾ Sample analysis by USEPA Method 524.2.

Results validated following protocols specified in OU2 Groundwater Monitoring Plan (ARCADIS 2001; 2006; 2014).

Total VOCs are rounded to two significant figures.

Bold indicates constituent detected

NYSDEC New York State Department of Environmental Conservation

USEPA United States Environmental Protection Agency

VOCs Volatile organic compounds

J Value is estimated concentration

µg/L Micrograms per liter

-- Not Analyzed